IMPACT OF AMRUT SCHEME IN JAMMU AND KASHMIR: A STUDY OF ANANTNAG MUNICIPAL COUNCIL AREA

Thesis Submitted for the Award of the Degree of

DOCTOR OF PHILOSOPHY

in

Public Administration

By

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2025

DECLARATION

I, hereby declare that the presented work in the thesis entitled "Impact of AMRUT Scheme in Jammu and Kashmir: A study of Anantnag Municipal Council Area" in fulfilment of the degree of **Doctor of Philosophy (Ph. D.)** is an outcome of research work carried out by me under the supervision of Dr. Danish Gulzar, working as an Assistant Professor in the Department of Government & Public Administration of Lovely Professional University, Punjab, India. In keeping with the general practice of reporting scientific observations, due acknowledgements have been made whenever work described here has been based on findings of other investigators. This work has not been submitted in part or full to any other University or Institute for the award of any degree.

Rubaya 19-06-2025

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CERTIFICATE

This is to certify that the work reported in the Ph. D. thesis entitled "Impact of AMRUT Scheme in Jammu and Kashmir: A study of Anantnag Municipal Council Area" submitted in fulfilment of the requirement for the award of degree of **Doctor of Philosophy (Ph. D.)** in the Department of Government & Public Administration, is a research work carried out by Ms. Rubaya Akther D/O. Mr. Gul Mohd Hajam, Registration No. 12021145, is a bonafide record of her original work carried out under my supervision and that no part of thesis has been submitted for any other degree, diploma or equivalent course.

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Dated: 19-06-2025

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ABSTRACT

1. INTRODUCTION

The research study entitled "Impact of AMRUT Scheme in Jammu and Kashmir: A Study of Anantnag Municipal Council Area*"* aims to analyze socio-economic impact of urban development and town planning initiatives as enunciated under Atal Mission for Rejuvenation and Urban Transformation (AMRUT Mission) in Anantnag Municipal Council Area of Jammu & Kashmir, evaluate challenges faced during implementation of the mission programs and exploring prospects for sustainable development interventions in the region. The study focuses on emerging concerns of mitigating adverse effects of climate change and global warming, and promote sustainable use of natural resources, impetus towards renewable energy, green spaces, open spaces and technology driven innovate and smart urban development solutions.

The study also evaluates role of urban local bodies (ULBs)/ municipalities in transformation of urban landscape in towns and implementation of regional/ national programmes for town planning, apart from providing suggestions for revival of town planning approaches to ensure effective and sustainable town planning as per emerging aspirations, and implement AMRUT like schemes effectively. In this context, the present study proposes an alternative town planning model titled as- "Smart Town Model: A Framework for Promotion of Sustainable Town Planning" which received IPR/Copyright registration from Copyright Office, Government of India, vide Dairy No. 41133/2024-CO/L and RoC No. L-162575/2025 on 13th March, 2025, and aims to provide comprehensive and integrated town development framework, enabling effective administrative decentralization in towns, convergence of development plans, and a vibrant mechanism to promote coordination and communication between town planning agencies. The proposed model is discussed and elaborated comprehensively in Chapter-6 of the study.

2. STATEMENT OF THE RESEARCH PROBLEM

The study analyzes impact of urban development and town planning initiatives as implemented under AMRUT scheme in Anantnag Municipal Council Area of Jammu & Kashmir, evaluation of implementation challenges faced by the mission programs and exploring prospects for sustainable development interventions in the region. As main focus of AMRUT scheme is towards improvement in water supply networks in urban areas, development of sewerage facilities and septage management, construction and development of storm water drains to reduce flooding, better provisions of pedestrian, non-motorized and public transport facilities, including availability of parking spaces, and enhancing amenity value of cities by creating and upgrading green spaces, parks, recreational centres and play areas, especially for children, the present study attempts to analyze impact of AMRUT scheme in Anantnag municipal council in context of these development areas. Anantnag Municipal Council, spread over 25 municipal wards, has been included under the AMRUT Mission in 2015 AD, and development projects are jointly managed by Anantnag Municipal council and district level offices of other line departments, under overall supervision by the deputy commissioner's office.

Although district administration in consonance with regional administration of J&K Union Territory, is engaged in implementing various urban development reforms enunciated under AMRUT Mission, including schemes for optimisation of drinking water supply, development of sewerage facilities and septage management and upliftment of drains to reduce flooding, multiple reports published in leading local newspapers and as physically observed during field work of the present study, Anantnag municipal council area faces immense concerns of town planning like population congestion due to inadequate land planning and housing facilities, insufficient road infrastructure leading to frequent traffic snarls, drainage issues resulting in submergence and inundation of roads, poor waste management, lack of community parks & open spaces, inadequate green spaces to mitigate adverse effects of climate change and global warming, and skewed use of sustainable and smart urban development technologies like e-rickshaws, e-buses, geo-mapping, solar energy and waste re-cycling.

3. RESEARCH OBJECTIVES OF THE STUDY

Major objectives of the present study are:

1. To understand the interlinkage between sustainable development and town planning
2. To examine the working of AMRUT scheme in Jammu and Kashmir
3. To assess the impact of AMRUT scheme on town planning in Anantnag Municipal Council Area
4. To analyze the efficacy of AMRUT scheme in dealing with the challenge of realizing the SDG-11 in Anantnag Municipal Council Area
5. To evaluate the role of local urban government in implementation of AMRUT Scheme

4. RESEARCH METHODOLOGY OF THE STUDY

The study aims at applied research framework using 'Mixed Research Methodology' approach, including both qualitative and quantitative aspects such as qualitative aspects in terms of exploration of public perspectives, opinions and satisfaction about availability and quality of various public services, as enunciated under the AMRUT mission and impact of AMRUT Mission in Anantnag Municipal Council Area of Jammu and Kashmir, as well as vital perspectives about town planning of Anantnag Municipal Council area received from officers & staff from Anantnag district administration and other stakeholders. Quantitative aspects of this study include numerical data such as the size of research sample, physical and quantifiable data about various projects implemented under AMRUT scheme in Anantnag Municipal Area, including number of lanes developed/ maintained, number of drains constructed/ repaired etc.

Sample population for the study was selected from 25 municipal wards of Anantnag Municipal Council in Jammu and Kashmir, using simple random sampling technique and keeping sample size 300. Both primary and secondary data sources are utilized for the present study, including the research data received from two hundred fifty community members through structured questionnaires, and adopting unstructured interview technique to illicit comprehensive and valuable information from several key

stakeholders, that included twenty-five ward councilors of the selected twenty-five municipality wards of Anantnag Municipal Council, ten officers and staff from the Anantnag Municipality Council, ten officers from the Anantnag District Administration and five members from the Anantnag District Development Council (DDC).

For the present study, also a significant amount of data have been collected through Right to Information Act (RTI) applications, government reports, and secondary data from published research articles, review papers, published books, institutional reports from global development agencies as well as data from government websites. To ensure comprehensive analysis of the acquired primary and secondary data, and to reveal meaningful statistical inferences in terms of the results and findings of the present research study, various data analysis methods and tools are used, such as tabulation, charts, graphs, bar diagrams and other statistical analysis tools as per data specifications and requirements.

5. KEY RESULTS & FINDINGS OF THE STUDY

The objective-wise major findings of the present study are-

1. Key Findings for Research Objective-I

The results and findings in context of research objective-I of the study, reveal an intricate and close-knit association between sustainable development and town planning, and strongly advocate for understanding of these vital concepts in unison as well as incorporation of emerging innovative/ smart sustainable development solutions into town planning processes, to ensure inclusive, eco-friendly, resilient and sustainable socio-economic development.

2. Key Findings for Research Objective-II

Comprehensive analysis of results and findings in context of research objective-II, reveals that Jammu & Kashmir because of its unique topography, hilly terrain, immense seismic vulnerability and volatile political environment, is facing significant administrative and development challenges, that affects socio-economic development of the union territory as well as implementation of development initiatives, including implementation of urban development and town planning schemes such as AMRUT Mission.

However, the regional administration is navigating the trajectories of urban planning and development across J&K through implementation of AMRUT scheme, under which till now, both capital cities of Srinagar and Jammu have been included along with towns of Anantnag Municipality Council, Kargil town and Leh town (Kargil town and Leh town are presently governed by administration of UT of Ladakh). As provided under the mission guidelines of the AMRUT scheme, various development projects have been implemented in these selected cities and towns, to improve drinking water services, drainage and sewerage facilities, waste management, septage, public transportation, development of public parks and green spaces, creation of children play areas and recreational facilities etc.

3. Key Findings for Research Objective-III

The results and findings for research objective-III, reveal that majority of the citizens/ residents of Anantnag Municipal Council Area, are either strongly unsatisfied, unsatisfied or partially satisfied about impact of AMRUT scheme on development of basic urban infrastructure as well as improvement in accessibility and quality of selected basic public services, as enunciated under the AMRUT Mission and delivered in the Anantnag Municipal Council Area of Jammu & Kashmir.

The comprehensive analysis of the received data also highlighted several challenges of town planning and implementation issues of AMRUT mission in the Anantnag Municipal Council region, such as-

a) Inadequate drainage infrastructure

b) Poor waste management

c) Poor public transportation services, lack of optimum parking spaces, lack of adoption of ICT tools for smart traffic management systems, and absence of sustainable public mobility solutions such as cycling tracks & pedestrian walkways

d) Lack of community level public parks, open spaces, green spaces and recreational facilities

e) Poor electricity services for both residential and commercial use

f) Deficient administrative coordination between public agencies operating in Anantnag Municipal Council region and implementing AMRUT Mission

g) Lack of Public Awareness about urban planning and welfare programs which diminishes the prospects for participatory development and results in poor public support for these programs/ schemes

h) Insufficient focus towards incorporation of sustainable development paradigms, such as use of roof top solar panels, wide spread use of E-buses and E-rickshaws, development of cycling tracks etc.

i) Lack of public lavatories, especially for women and children

4. Key Findings for Research Objective-IV

Results for research objective-IV, highlight that most of research respondents are partially satisfied regarding effectiveness of AMRUT scheme and other regional urban planning initiatives in implementation of sustainable development mechanisms as targeted under SDG-11, in Anantnag Municipal Council Area, especially in terms of development of public parks, green spaces and recreational areas, implementation of sustainable development paradigms such as rain water storage, use of solar energy, development of pedestrian walkways and cycle tracks as well as use of non-motorized public transport and other vital sustainability services.

5. Key Findings for Research Objective-V

The results and findings of research objective-V, highlight contribution of regional administration of Jammu & Kashmir and central government towards empowerment of urban development institutions/ ULBs, especially facilitating establishment of comprehensive three-tier Panchayat Raj System in Jammu & Kashmir, and holding of first ever elections for Block Development Councils (BDCs) and District Development Councils (DDCs) in 2020 AD. The research respondents also acknowledged importance of 74th Constitutional Amendment Act-1992 in context of providing constitutional status, legal identity and authority, devolution of specified functional powers and responsibilities, and facilitating financial autonomy to the local urban government institutions across the country, although these provisions were adopted in

Panchayat Raj System of Jammu & Kashmir only after abrogation of Article-370 and Article-35A of the Constitution of India on 5th August 2019. However, the respondents are moderately satisfied regarding role and impact of Local Urban Government/ Anantnag Municipal council on implementation of AMRUT scheme in the Anantnag Municipal Council Area of Jammu and Kashmir.

6. MAJOR SUGGESTIONS OF THE STUDY

A. Suggestions for Short Term Interventions-

1. Identification of priority areas and development gaps, that need urgent policy interventions
2. Using pooling of funds available under different development projects
3. Effective facelift of public offices needs to be undertaken on priority, including procurement of necessary office infrastructure and IT machinery
4. Rationalization of manpower across different development and town planning departments, to infuse new blood into administrative working pattern
5. Use of digital technologies to facilitate real time online communication between heads of different departments, on daily basis or atleast on alternate days, to ensure effective inter-departmental coordination and operational synergy
6. Using manpower from urban local bodies (ULBs), teaching community and members from NGOs, for public awareness about development schemes and seek their cooperation for implementation of town planning programmes. It will ensure both participatory planning as well as localized development through bottom-up development approach
7. Incentivization of waste management process, wherein households will be encouraged to segregate the waste at source and properly dispose it off through separate bins as solid biodegradable waste, solid non-biodegradable waste, liquid waste, hazardous and non-hazardous waste etc.

B. Suggestions for Medium Term Interventions-

1. Creation of a core administrative group/ team to study sustainable development initiatives of developed nations/ states, and develop a framework for integration of sustainable development goals (SDGs) with town planning perspectives, to

facilitate action plan for implementation of each sustainable development goal (SDG) under town planning process.

2. Under the overall guidance and supervision of this core team, divide various basic public services among town planning departments, to facilitate departmental responsibility to achieve development targets of specific public service and ensure effective supervision of the core administrative team.

C. Suggestions for Long Term Interventions-

1. Holistic review of town planning paradigms in context of local area-based needs, and restructuring of overall town planning policy framework, to achieve targets of sustainable development.

2. The various town planning initiatives and basic public services, which can be considered under this long-term intervention mechanism, include- shifting of housing colonies, commercial establishments, implementation of town re-designing model, development of dedicated urban clusters like heritage cluster, religious cluster, education hub, commercial centre etc. widening of roads and lanes, incorporation of digital technologies for traffic management, procurement of E-buses and E-rickshaws, increasing plantation across the town etc.

For effective implementation of these suggestions, the study provides an alternate town planning model entitled "Smart Town Model: A Framework for Promotion of Sustainable Town Planning", as a vital outcome of the study. The proposed model, using multistep comprehensive approach, presents an alternative administrative framework for developing smart towns by integrating Sustainable Development Goals (SDGs) into urban planning processes, pooling funds, coordinating town planning schemes, adopting a bottom-up planning, and fostering robust public-private partnerships, to ensure effective and sustainable town planning paradigm.

7. SCOPE OF THE RESEARCH STUDY

The scope of the research study lies in understanding implementation challenges and impact of urban development and town planning programs as enunciated under AMRUT Mission in the Anantnag Municipal Council Area, thereby providing valuable inputs about effectiveness of these town planning initiatives and providing suggestions to Jammu & Kashmir Administration to facilitate optimum and sustainable urban

development and town planning in the region. The study also proposes an alternate town planning model in this regard, which is titled as- “Smart Town Model: A Framework for Promotion of Sustainable Town Planning” and aimed to rejuvenate and transform town planning paradigms, both locally, nationally as well as globally. The present study also aims to increase the knowledge base about urban development, town planning, sustainable development and urban governance, by facilitating new insights into area-specific challenges and regional disparities in town planning, governance and public policy perspectives.

8. LIMITATIONS OF THE RESEARCH STUDY

1. To limit sample size for timely research completion and detailed statistical analysis, the study area is limited to Anantnag Municipal Council Area of Jammu & Kashmir only. Hence, further studies are suggested to evaluate town planning paradigms in other regions of Jammu & Kashmir to develop a holistic town planning and development approach.

2. Also, as recommended by Research Advisory Committee/ RDC panel, major focus of the present research study has been towards analysis of impact of AMRUT scheme on town planning in Jammu & Kashmir, especially in Anantnag Municipal Council. As such, more analytical research studies are needed to evaluate effectiveness and impact of other major urban development and town planning schemes, enunciated by regional administration as well as by central government.

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*"The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn and relearn-**Alvin Toffler**"*

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Thank You All & Almighty Bless

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LIST OF ABBREVIATIONS

S. No	Abbreviation	Description
1.	DDC	District Development Council
2.	AMRUT	Atal Mission for Rejuvenation and Urban Transformation
3.	SAAP	State Annual Action Plan
4.	NGO	Non-Government Organizations
5.	COVID-19	Coronavirus Disease-2019
6.	GDP	Gross Domestic Product
7.	PMAY	Pradhan Mantri Awas Yojana
8.	ULBs	Urban Local Bodies
9.	HRIDAY	Heritage City Development and Augmentation Yojana
10.	MDGs	Millennium Development Goals
11.	SDGs	Sustainable Development Goals
12.	CPA	Comparative Public Administration
13.	ULBs	Urban Local Bodies
14.	DPRs	Detailed Project Reports
15.	J&K-ERA	J&K Economic Reconstruction Agency
16.	AMC	Anantnag Municipal Council
17.	JNNURM	Jawahar Lal Nehru National Urban Renewal Mission
18.	UT	Union Territory

19.	NITI-Aayog	National Institution for Transforming India
20.	SUP	Strategic Urban Planning
21.	ICT	Information and Communication Technologies
22.	NPM	New Public Management
23.	RTI	Right To Information
24.	J&K	Jammu & Kashmir
25.	GP	General Public
26.	WC	Ward Councillors
27.	OS-AMC	Officers & Staff from Anantnag Municipal Council
28.	OS-ADA	Officers & Staff from Anantnag District Administration
29.	MM-ADDC	Members from Anantnag District Development Council
30.	STM	Smart Town Model

CHAPTER-1

INTRODUCTION

Contents in the Present Chapter

1.1 Introduction

The study entitled “Impact of AMRUT Scheme in Jammu and Kashmir: A Study of Anantnag Municipal Council Area*”* aims to analyze the multifaceted socioeconomic ramifications of developmental initiatives implemented under the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) within the specified jurisdiction of Anantnag Municipal Council of Jammu & Kashmir. The research delves into operational impediments encountered during scheme implementation while exploring avenues for sustainable developmental interventions in the region. The study's significance is amplified by burgeoning concerns regarding anthropogenic climate change impacts and effects of global warming in urban ecosystems, coupled with the imperative for judicious resource utilization, renewable energy adoption, preservation of verdant spaces, and implementation of technology-driven urban solutions. Furthermore, it propounds crucial recommendations for fostering sustainable urban planning mechanisms, ensuring participatory governance, and promoting inclusive development across Jammu & Kashmir, particularly within Anantnag Municipal Council.

The research study provides an innovative "Smart Town Model" framework, which received IPR/Copyright registration from Copyright Office, Government of India, vide Dairy No. 41133/2024-CO/L and RoC No. L-162575/2025 on 13th March, 2025.[1] The model meticulously delineated in Chapter-6, offering fresh perspectives on contemporary urban planning complexities. This paradigm encompasses sustainable development solutions tailored for towns and peri-urban zones. The proposed suggestions of the study along with the model aim to enhance the theoretical foundations of public administration, urban governance, and sustainable development, serving as a valuable resource for academicians, urban planners, and policy architects engaged in future municipal development initiatives, and uniquely positions the AMRUT scheme's implementation within the broader context of sustainable urban development, while providing actionable insights for future urban planning strategies.

[1] https://copyright.gov.in/Documents/ERegister/E-Register_March_2025.pdf

1.2 Profile of District Anantnag of Jammu & Kashmir

Anantnag district of Jammu & Kashmir has a land area of 3574 km2, population 10.78 Lac (as per socio-economic census-2011)[2], and comprise of four administrative sub-divisions, seven development blocks, twelve tehsils, three hundred eighty-seven villages and ten municipalities. The area is epicentre of trade and commercial activities, and rich in world famous tourism resorts. District Anantnag is having agriculture, horticulture, sericulture, livestock & veterinary, forest produce, fisheries, rural development, Co-operatives, roads & buildings department, Banking & insurance services, Labour & Industries department, tourism industry and informal sector, as major pillars of economic growth. Anantnag has emerged as epicentre of J&K tourism industry and favourite attraction for thousands of local tourists and foreign adventurers, because of immense number of world class natural tourism destinations, green alpine forests, snowy mountain peaks & springs with fresh water, spread across the region, besides having significant scope for religious and cultural tourism. Following is a glimpse of major tourist destinations of Anantnag district-

1.2.1 Major Tourist Places in Anantnag District of Jammu & Kashmir

Pahalgam: It is world famous health resort situated in north east of District Anantnag among snow-caped hills and evergreen forests. Its cool invigorating and pleasant climate, gushy waters of Lidder river and fascinating valleys attract thousands of local and foreign tourists every year. Besides, mountain peaks of the region provide opportunities for mountaineering and adventure sports while as Lidder waters are famous for water rafting sport. Pahalgam also facilitates religious tourism as the region acts as base camp for annual Amarnath Pilgrimage.

Kokernag: The health resort lies in south east of District Anantnag. It is a world class tourist destination due to its natural landscapes, fresh water spring, evergreen pine trees, a terraced garden, a botanical garden, majestic chinars and world-famous Trout fish farm.

[2] https://www.census2011.co.in/census/district/632-anantnag.html

Verinag: The garden built by Mughal Emperor Jehangir also lies in south east of District Anantnag. It is famous for blue water spring (Origin of Jhelum-river), pleasure garden, summer house and evergreen mountains.

Achabal: The health resort lies in south east of District Anantnag. It has beautiful water spring gushing out of the Sonsanwar Hill and flowing in three channels across the terraced garden, beautifying and ornamenting the Mughal-garden and paving way for mesmerising fountains.

Daksum: It is a beautiful valley covered on all sides by majestic hills and evergreen forests, lying in south of District Anantnag. Its fresh water streams flowing through pine trees and terraced valley, Trout fish farm and its connectivity to uphill snow-capped mountains; attract thousands of visitors round the year.

Sinthantop: The scenic plateau is located 3 KM uphill from Daksum on connecting road between Kashmir and Kishtwar- Baderwah region. The health resort has emerged preferred destination for local and foreign visitors due to its snow-capped mountains, skiing slopes, evergreen forests and small fresh water springs.

1.2.2 Cultural Heritage & Religious Tourism Places in Anantnag District of Jammu & Kashmir

Jammu & Kashmir is the abode of saints, sufies and munies with district Anantnag being no exception, as the district is bestowed with splendid religious wealth like numerous shrines, temples and other places of worship and reverence belonging to different faiths such as follows:

Ziarat Hazrat Zain-ud-Din Wali Aishmuqam: The shrine located on a hill lock on Anantnag- Pahalgam Road overlooking the gushing Lidder river, is abode of famous Muslim saint of 15th century Sheikh Zain-ud-Din.

Masjid Syed Sahib Martand: The mosque constructed in memory of sufi saint Hazrat Syed Mohd in 16th century AD at the foot of Anichteep of Martand Plateau, is revered religious place among Muslim faith.

Mattan (Bawan) Temple: The temple is situated in Bawan village some 8 KM from Anantnag district headquarters. On its north side is a sacred spring gushing out from fissure in the limestone rock.

Martand Temple: The ruins of Martand temple commonly known as Pandu-Koru lie on the krewa above Anantnag town. It belongs to Martand or the sun god of Brahmin faith and attracts large visitors every year.

Khir Bhawani Asthapan Devibal: The temple situated in Mohalla Khaki Sahib dedicated to the holy spring of Khir Bhavani, attracts a good number of devotees and is considered a holy place by entire Pandit community.

Nagdandi Ashram Achabal: Situated 2KM away from Achabal town, it is a fairy big Ashram founded by Swami Ashokananda and dedicated to Ramakrishna Paramahamsa.

Bumzu Caves Pahalgam: Bhumju or Bumzu or Bhaumajo caves lie in Lidder valley of Pahalgam with cave temple standing at the far side of limestone cliff. The holy place attracts large number of devotees and other visitors.

Anantnag due to its natural geography, scenic landscapes and rich cultural heritage is having tourism as a core sector of socio-economic development and catalyst for employment generation, which mandates increased focus towards development of basic physical and economic infrastructure particularly in major towns of the district. The region is faced with rapid urbanization due to increased people migration towards towns for better job opportunities and life quality. As such, integrated sustainable urban development is direly needed to foster better town planning ensuring citizen centric and citizen friendly governance.

1.3 Statement of the Research Problem

This research study endeavours to conduct a comprehensive evaluation of the urban metamorphosis initiatives undertaken through the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) in the Anantnag Municipal Council of Jammu & Kashmir, and seeks to scrutinize the multifaceted challenges encountered during program implementation while simultaneously exploring avenues for sustainable urban development interventions in the region. The research problem emerges from the confluence of several critical urban development predicaments plaguing the municipal council, as highlighted in multiple reports published in leading local newspapers and as physically observed during field work of the present study, such as- the residential infrastructure exhibits substantial inadequacies, particularly

affecting economically disadvantaged populations residing in informal settlements and peripheral zones.

According to reports from Greater Kashmir's February 2022 publication, Anantnag's urban development proceeds without a comprehensive metropolitan blueprint. The municipality witnesses indiscriminate construction encroaching upon vital hydrological features, with edifices proliferating across waterways and aquifers. These aqueous channels have either been obliterated or deteriorated into sewage conduits due to rampant urbanization (www.greaterkashmir.com)[3]. The transportation network suffers from suboptimal road infrastructure, manifesting in chronic traffic congestion and waterlogging during precipitation events. The municipality's drainage system demonstrates severe structural deficiencies, characterized by deteriorating and constricted channels that frequently result in overflow incidents and noxious effluvia.

Further exacerbating these challenges is the conspicuous absence of adequate waste management protocols, public parks, green spaces and recreational infrastructure. The dearth of public amenities, including sanitation facilities, creates substantial impediments for vulnerable demographics, particularly women and children. Moreover, the administrative apparatus has demonstrated minimal initiative toward incorporating sustainable urban planning solutions, such as electric mobility infrastructure and renewable energy integration.

Significance of the research study is amplified by Anantnag's unique position as the sole municipal entity within the district selected for urban transformation under the AMRUT framework in 2015 AD. The administrative structure of the Anantnag Municipal Council encompasses twenty-five municipal wards, each under the supervision of designated ward councillors, with the overarching governance executed by the council chairperson and supporting administrative personnel. The implementation framework for AMRUT scheme involves collaborative efforts between the Municipal Council and district-level administration to execute various urban development initiatives delineated under the scheme. These interventions target the enhancement of fundamental urban infrastructure and services, encompassing:

[3] https://www.greaterkashmir.com/uncategorized/anantnag-without-master-plan/

1. Potable water distribution systems
2. Sewerage and septage management
3. Drainage infrastructure development
4. Road network optimization
5. Public transportation enhancement

The Anantnag Municipal Council along with support from district level administration, have been implementing several town planning projects as outlined under AMRUT scheme, that aim to augment basic physical urban infrastructure and facilitate vital urban services to the residents such as better provisions for drinking water, revival of septage and sewerage services, development of proper drainage mechanism, construction of optimum road infrastructure and promotion of public transportation. Details of some projects started under AMRUT scheme in Anantnag Municipal Council Area along with fund allocation are mentioned as below-

Table 1.1: Total SAAP Projects for AMRUT scheme in Anantnag for Financial Year 2017-2020 (Source[4]: Data Collection through RTI Application)

Project Component	**No. of Projects**	**Project Name**	**Allocation (In Crores)**
Sewerage & Septage	02	Septage management & procurement of sucker jetting machines	0.50
		Construction of 4 Minimal Liquid Discharge (MLD) Sewerage Treatment Plants (STPs) & Sewerage Pipeline	23.0

[4] Data collected in person by the researcher using RTI application

Drainage	01	Construction of Storm water drains in uncovered areas	0.27
Urban Transport	01	Development of multi-level public parking facility at Janglat Mandi, Anantnag	3.0
Total Projects for financial Year 2017-20			**26.77**

Table 1.2: Total Investments for AMRUT Scheme in Anantnag for FY 2017-2020 (Source[5]: Data Collection through RTI Application)

Serial No.	Name of Town	Drinking Water Supply Services	Sewerage Services & Septage Management	Drainage Services	Green Spaces & Parks	Urban Transportation	Total (In Crores)
1.	**Anantnag**	**19.41**	**239.15**	**59.95**	**12.30**	**55.90**	**386.76**

This research aims to address several crucial questions like- 'What are the quantifiable impacts of AMRUT initiatives on urban infrastructure development?', 'How do implementation challenges affect program efficacy?' and 'What sustainable development opportunities exist for future urban planning in the region?'

The study's theoretical framework incorporates principles of sustainable urban development, environmental justice, and urban governance, and employs a mixed-methods approach, combining quantitative analysis of infrastructure development metrics with qualitative assessment of stakeholder perspectives and implementation challenges. The findings are expected to contribute significantly to the body of

[5] Data Collected in person by the researcher using RTI application

knowledge regarding urban transformation in developing regions, particularly in politically sensitive areas.

Furthermore, this research aims to generate actionable recommendations for policymakers and urban planners, potentially influencing future urban development initiatives in similar geographical and administrative contexts. This study's outcomes could serve as a valuable reference for other municipalities implementing AMRUT initiatives, while also contributing to the broader discourse on sustainable urban development in emerging economies.

1.4 Rationale for the Study

Motivation for the research arose due to deficient urban socio-economic and physical infrastructure in the Anantnag Municipal Area, with skewed town planning, inadequate basic public services, such as- proper facilities for housing, electricity services, drinking water facilities, drainage network, optimum provisions for waste management; insufficient resource planning to mitigate climate disasters, suboptimal focus towards adoption of sustainable urban development solutions and lack of research in planning and policy studies in the region to aid and support the administration for ensuring sustainable town planning and effective public service delivery.

1.5 Research Objectives

Major objectives of the present research study are:

1. To understand the interlinkage between sustainable development and town planning
2. To examine the working of AMRUT scheme in Jammu and Kashmir
3. To assess the impact of AMRUT scheme on town planning in Anantnag Municipal Council Area
4. To analyze the efficacy of AMRUT scheme in dealing with the challenge of realizing the SDG-11 in Anantnag Municipal Council Area
5. To evaluate the role of local urban government in implementation of AMRUT Scheme

1.6 Research Questions

1. What is the interlinkage between sustainable development and town planning?
2. What is the importance of sustainable development in town planning?
3. What is the role of AMRUT scheme in town planning of Jammu & Kashmir?
4. What is the impact of AMRUT scheme on town planning in Anantnag Municipal Council Area of Jammu & Kashmir?
5. What is the effectiveness of AMRUT scheme in realizing the SDG-11 targets in Anantnag Municipal Council Area of Jammu & Kashmir?
6. What is the role of local urban government/ ULBs for implementation of AMRUT scheme in Anantnag Municipal Council Area of Jammu & Kashmir?
7. What are key challenges of town planning and implementation of AMRUT scheme in Anantnag Municipal Council Area of Jammu & Kashmir?
8. What measures can be suggested for sustainable town planning and effective implementation of AMRUT scheme in Anantnag Municipal Council Area of Jammu & Kashmir?

1.7 India's Aal Mission for Rejuvenation and Urban Transformation-AMRUT (Objectives, Guidelines and Progress)

Due to paced urbanization because of increased migration of rural people towards urban regions, the urban centres in India are increasingly facing challenges of urban housing, scarcity of basic resources and alarming levels of environment pollution. As such, to address these urban planning challenges and to ensure holistic development of urban infrastructure in major cities and towns of the country, Ministry of Housing and Urban Affairs, Government of India, launched Atal Mission for Rejuvenation and Urban Transformation (AMRUT) on pan-India basis on 25th June, 2015[6]. The flagship scheme stands as a cornerstone initiative conceived to invigorate urban infrastructure and elevate the quality of life in cities and towns, through sustainable and citizen-centric development, while addressing the burgeoning challenges posed by rapid

[6] https://pib.gov.in/PressReleasePage.aspx?PRID=1885837

urbanization by fostering robust water supply systems, efficient sewage networks, green urban spaces, and non-motorized transport facilities.

This transformative mission underscores the principle of cooperative federalism, empowering states and urban local bodies to design and implement projects tailored to their unique contextual imperatives. By leveraging a performance-based approach, AMRUT incentivizes fiscal responsibility and efficient execution, thereby fostering a culture of accountability and innovation in urban governance. Moreover, the scheme integrates technological advancements such as Geographic Information Systems (GIS) for urban planning, ensuring data-driven decision-making and holistic development. As a pivotal stride towards achieving India's Sustainable Development Goals (SDGs), AMRUT exemplifies the synergy of policy ingenuity and grassroots empowerment in addressing the multifaceted exigencies of urban transformation.

1.7.1 Thrust and Focus Areas of AMRUT Mission

The Mission aims to focus on following thrust areas:

I. Improvement in water supply networks in urban areas

II. Development of sewerage facilities and septage management

III. Construction and development of storm water drains to reduce flooding

IV. Better provisions of pedestrian, non-motorized and public transport facilities, including availability of parking spaces

V. Enhancing amenity value of cities by creating and upgrading green spaces, parks, recreational centres and play areas, especially for children

1.7.2 Coverage of the AMRUT Mission Programs

Five hundred cities and towns have been taken up under the mission gradually that include-

I. All capital cities and towns with a population of over one lakh

II. All cities/towns classified as heritage cities by Ministry of Housing and Urban Affairs Government of India under HRIDAY Scheme

III. 13 cities/towns on the stem of the main rivers with population of 75,000- less than 1 lakh

IV. 10 cities from hill states, islands & tourist destinations

1.7.3 Components of the AMRUT Mission

Components of the AMRUT mission include- provisions for capacity building and development of human resource, implementation of development reforms, augmentation of water supply, sewerage and septage management, development of storm water drainage networks, urban transportation facilities and development of green spaces as well as parks. Also, emphasis is laid towards adaptation of smart innovations and sustainable technology interventions for development of vibrant physical infrastructure in the selected cities and towns.

1.7.4 Implementation Strategy of the AMRUT Mission

The AMRUT mission is being implemented as centrally sponsored scheme under the spirit of 'Cooperative federalism' to ensure holistic synchronisation and administrative synergy between federal government and respective regional governments/ UT administrations, during all stages of policy planning, fund allocation and implementation of program(s), using Service Level Implementation Plans (SLIPs), State Annual Action Plan (SAAP) and implementation of projects through Urban Local Bodies (ULBs).

1.7.5 Allocation of Funds and Funding Pattern of AMRUT Mission

The initial financial outlay for AMRUT mission was Rs 50,000 crore for five years from 2015 AD to 2019 AD, which was later extended upto financial year 2025-26 AD (under AMRUT 2.0)[7]. The funding pattern for the mission consist of the following components:

1. Project funding- Equivalent to 80% of the annual budgetary allocation
2. Incentives for reforms- Equivalent to 10% of the annual budgetary allocation

[7] https://www.ndtv.com/india-news/cabinet-approves-amrut-2-0-until-2025-26-2573559

3. State funds for Administrative and Office Expenses (A & OE)- Equivalent to 8% of the annual budgetary allocation
4. Ministry of Housing and Urban Affairs (MoH & UA) funds for Administrative & Office Expenses (A & OE)- Equivalent to 2% of the annual budgetary allocation

1.7.6 Progress and Present Status of the AMRUT Mission

The urban planning scheme was initially started as 'AMRUT 1.0' for a five years period from 2015 AD to 2019 AD, and was subsequently extended for next five years i.e. until the financial year 2025 AD-2026 AD under AMRUT 2.0 (www.newsonair.gov.in). The extension in AMRUT scheme was necessitated because of the delay in completing various projects as enunciated under the mission, due to strict lockdown and social distancing restrictions during the COVID-19 pandemic as well as other administrative reasons.

The mission epitomizes India's stride towards sustainable urbanization. Its primary focus on water supply, sewerage, urban transport, and green spaces underscores the mission's alignment with Sustainable Development Goals. AMRUT's notable accomplishments include provisioning over 100 lakh urban households with tap connections and significant augmentation of sewerage infrastructure, fostering improved urban resilience and public health. However, the scheme encounters multifaceted challenges. Financial constraints, fragmented governance structures, and limited institutional capacity impede its holistic implementation. Delays in project execution and uneven regional progress further underscore disparities in urban infrastructure development. Despite these hurdles, AMRUT's integration of technology-driven approaches and participatory governance has amplified citizen-centric urban transformation. Strengthening inter-agency coordination, fostering capacity-building initiatives, and ensuring equitable resource allocation are pivotal for sustaining its long-term impact. AMRUT's trajectory thus reflects both its transformative potential and areas warranting critical intervention.

As on date, 7541 urban development and town planning projects located across numerous cities and towns of the country, are completed under the AMRUT mission, while as 1371 projects stand awarded to respective development agencies, and fifty-

nine projects are under progress at various stages of completion (www.amrut.gov.in). Grossly, the flagship urban development scheme has emerged as vital transformative project for augmentation of urban civic facilities and promotion of quality urban life.

1.8 Sustainable Development (Meaning and Importance)

Sustainable development has been explicitly defined under the Brundtland Report of 1987, which refers to sustainable development as that form of socio-economic development that suffices the mandatory requirements of the present generations, without compromising the basic needs of the future generations. Such a development model takes priority focus towards conservation of natural environment, vegetation, and most essentially ever diminishing natural resources, and emphasize adaptation of alternate sources of energy such as solar energy, wind energy, use of ecofriendly infrastructure development techniques, protection of natural water bodies, including glaciers, rivers and lakes, development of green spaces, public parks, facilities for a quality living standard, as well as adoption of sustainability mechanisms in town planning process, such as use of scientific waste segregation, technologically driven waste disposal and waste recycling to produce energy, development of proper roads, lanes, pedestrian walkways and cycling tracks, use of optimum facilities for sanitation and drainage services.

United Nations framed seventeen sustainable development goals (SDGs) in 2015, that cover wide range of public services such as alleviation of global poverty, hunger, illiteracy, malnutrition, development of provisions for better healthcare facilities, checking rising temperatures in view of unprecedented global warming and climate change, decreasing pollution levels in environment, through a comprehensive policy framework wherein, specific targets have been enlisted for achieving each of these sustainable development goals by 2030 AD.

Such type of development ensures judicial use of energy resources, decreasing emissions of GHGs, promoting green areas in urban regions through social forestry and reforestation, and using sustainable and ecofriendly development planning solutions.

UN-Habitat, the leading United Nations agency working towards a better urban future, has provided several basic principles related to urban sustainability in its reports. These principles can aid the provision of urban smartness based on ICT interventions, and assist with the execution and evaluation of performance vis-à-vis the sustainable development goals. UN-HABITAT Planning Sustainable Cities: Global Report on Human Settlements 2009, sets four basic roles for urban planning:

I. Addressing rapid urbanization, urban poverty, and proliferation of slums

II. Addressing sustainable urban development and climate change

III. Addressing urban crime and violence

IV. Addressing post-conflict and post-disaster situations

To address sustainable urban development and climate change, this report sets out 8 essential aims, gathered under the policy referred to as "Bridging the Green and Brown Agendas":

I. Development of renewable energy

II. Striving for carbon-neutral cities

III. Distributed power and water systems

IV. Increasing photosynthetic spaces as part of green infrastructure

V. Improving eco-efficiency

VI. Increasing sense of place

VII. Sustainable transport

VIII. Developing cities without slums

UN-HABITAT International Guidelines on Urban and Territorial Planning (2015), provides the urban-planning principles supporting the implementation of sustainable urban development aims (as given above) and puts forward four basic planning principles that should be inherent to any master town/city planning exercise:

I. Advocate physical compactness

II. Promote social inclusiveness

III. Enable integrated and connected cities and territories

IV. Facilitate resilience to climate change

The symbiotic relationship between sustainable development, town planning, and India's ambitious AMRUT (Atal Mission for Rejuvenation and Urban Transformation) scheme, epitomizes a holistic approach to metropolitan evolution. This tripartite nexus addresses the emerging challenges of rapid urbanization while ensuring ecological stewardship. Urban planners integrate sustainability principles into the urban fabric through judicious land-use allocation, green infrastructure implementation, and transit-oriented development. These interventions dovetail seamlessly with AMRUT's cardinal objectives of ameliorating urban services and enhancing quality of life in towns.

AMRUT's multifaceted approach encompasses water supply augmentation, sewerage optimization, and storm water management- all quintessential elements of sustainable urban metabolism. The scheme's emphasis on creating verdant spaces and non-motorized transport corridors resonate with contemporary town planning paradigms that prioritize pedestrian-centric, low-carbon neighbourhoods. This convergence catalyses the metamorphosis of Indian urban regions into resilient ecosystems where infrastructure development is harmoniously balanced with environmental conservation. The resultant urban morphology not only addresses immediate anthropogenic needs but also safeguards the interests of posterity, embodying the essence of sustainable development as envisioned in the New Urban Agenda and SDG 11.

1.9 Sustainable Cities and Communities (SDG-11)

The United Nations' Sustainable Development Goals (SDGs) mechanism provides a comprehensive integrated approach towards mitigation of global concerns of poverty, hunger, lack of housing, health, education, issues of rapid urbanization, challenges of environment pollution, global warming and climate change. The eleventh Sustainable Development Goal- Sustainable Cities and Communities, in particular, specifies the

urgent need for renewed urban development policies in all the countries worldwide to emphasize the sustainable planning of cities and towns, developing environment-resilient and eco-friendly infrastructure, incorporating advanced information and communication technologies, facilitating accessible and quality urban services, reducing environment pollution, improving urban sanitation and waste management through technological interventions, increasing green spaces and recreational areas, and adopting smart and innovative methods in urban landscape.

A) Ten Targets under SDG-11

A wide range of urban infrastructure and urban services are targeted under the ten targets of SDG-11, which include-

1. Safe and Affordable Housing
2. Affordable and Sustainable Transport Systems
3. Inclusive and Sustainable Urbanization
4. Protect the World's Cultural and Natural Heritage
5. Reduce the Adverse Effects of Natural Disasters
6. Reduce the Environmental Impact of Cities
7. Provide Access to Safe and Inclusive Green & Public Spaces
8. Strong National and Regional Development Planning
9. Implement Policies for Inclusion, Resource Efficiency and Disaster Risk Reduction
10. Support Least Developed Countries in Sustainable and Resilient Building

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CHAPTER- 2

REVIEW OF LITERATURE

Contents in the Present Chapter

2.1 Brief Introduction

The present chapter of the study provides extensive review of the available literature, including a brief description of analytical findings as received from comprehensive review of these research papers, published articles, book chapters, government website data and archives, as well as institutional publications, that aims to develop wider understanding regarding perspectives of sustainable development, urban planning and town management theories and practices, with insights into cross cultural disparities in implementation of urban development reforms.

Till date 100 research papers, 04 government publications & 05 reports from national and international institutions, have been extensively reviewed, and for the convenience of enabling comprehensive relationship between global, national and local trends in evolution and development of sustainable development and urban development reforms, the literature review has been presented under following themes:

1. Global perspective of Sustainable Development & Town Planning

2. Sustainable Development and Town Planning in India

3. Sustainable Development and Town Planning in Jammu & Kashmir

2.2 Global Perspective of Sustainable Development & Town Planning

The convergence of sustainable development and town planning epitomizes a multifaceted paradigm shift in contemporary urban discourse. This burgeoning field amalgamates ecological stewardship with anthropocentric spatial organization, transcending perfunctory environmental considerations to embrace holistic socioeconomic resilience. Scholarly analysis reveals an intricate correlation between interdisciplinary approaches- from bioregionalism to circular metabolic frameworks, that challenge conventional urban morphologies. Progressive municipalities worldwide have eschewed atavistic planning methodologies, instead implementing avant-garde strategies that reconcile the ostensible dichotomy between urbanization and ecological integrity.

The literature elucidates how integrated planning processes catalyze symbiotic relationships between built environments and natural ecosystems, ultimately

engendering municipalities characterized by both anthropogenic functionality and biospheric concordance.

Nobuhiro Okamoto (2021) explores urbanization trends and processes in context of demographic transactions and employment opportunities in urban areas to suggest that levels of employment opportunities and population growth in cities and towns directly promotes migration from rural regions towards urban areas, and increases urbanizing process. This proposed input-out model, empirically tested on Chinese data, signifies correlation between these variables of urbanization and urban development mechanisms.

Daan Schraven, Simon Joss, Martin de Jong (2021) have traced evolution of urban development through analysis of diverse city labels used to give conceptual identity to urban development strategies and models. The study aimed at evaluation of reasons for increased adoption of city labels in scientific knowledge, details about dimensions of these labels and their correlations, and supposedly futuristic trajectories.

Sanna Stålhammar (2021) investigate values and narratives of urban biodiversity in context of socio-cultural norms in Cape Town, South Africa using green infrastructure approach based on interview methodology and focusing on green space and biodiversity management. The study suggests caution against universal use of Socio-cultural valuation in green infrastructure planning without consideration of informal engagements and recognition of potential of urban green for citizen building.

David Simon et al. (2021) through comparative analysis, evaluated challenges of climate change, sustainability and environment degradation as well as existing institutional framework, division of power and responsibilities/independence of local urban planners in small South African and Indian cities. The study emphasizes devolution of optimum authority to local governance institutions for sustainable and integrated town planning and efficient utilization of local fiscal resources.

Andrea. I. Frank, Andrew Flynn, Nick Hacking and Christopher Silver (2021) traced evolution of Green Infrastructure concept in academic parlance as well as practice since 1990, its importance in supporting sustainability, biodiversity, storm

water management as well as growing concern for promoting GI education in higher education institutions and professional education for development of GI sensitive skills among urban planners.

J. Kanyepe, M. Tukuta & I. Chirisa (2021) analyze interaction between transport, land-use and travel patterns in the urban areas to explore reasons of urban transportation problems including traffic congestion. The study using comprehensive analysis 45 articles from the year 2010 to 2020, suggest lack of research in developing countries in context of interaction between land-use and traffic congestion.

Malayaranjan Sahoo & Narayan Sethi (2021) evaluate the correlation between paced urbanization, population growth, technological revolution and environmental pollution. The study using factors such as, energy consumption, population density, as well as life quality, and data analysis techniques such as Wester Lund co-integration etc. The paper suggests proactive shift towards renewable energy sources-based development paradigms.

D. G. Yilmaz (2021) analyses impact of various urban development and city planning models in mitigation of climate change concerns and promotion of sustainable development frameworks as enunciated in United Nations' Paris Agreement-2015 agenda and subsequent development themes such as sustainable cities, climate-friendly development, and low-carbon cities. The study suggests use of sustainability frameworks to develop resilient and eco-friendly urban landscape.

Sethi. M. et al. (2021) focus on emerging need for interdisciplinary studies and research in areas of climate change, urban resilience, disaster management and policy studies. The study emphasizes growing concerns of climate change effects such as heat waves, floods, rise in sea levels etc; and suggests adaptation measures for key urban sectors of building infrastructures, water, urban planning, health and negotiated resilience in collaborative governance approach.

C. Cretu et al. (2021) analyze implementation challenges and coordination issues in urban planning and execution of various urban development projects such as need for digging works and soil extraction during development of roads, lanes and drainage

networks. The paper emphasizes proactive institutional coordination for promotion of effective urban development programs.

Geekiyanage. D et al. (2020) have undertaken an in-depth review of literature regarding community engagement and participatory decision making in urban planning, from 2010 to 2020, to study challenges and implications of community engagement in urban planning. The study found 48 challenges and barriers in community engagement, with absence of any purposeful community engagement mechanism, lack of community awareness and absence of institutional framework for facilitation of community engagement, as the prominent constraints.

The research paper of **J. Vernon Henderson & Matthew A. Turner (2020)**, analyse trends of urbanization in various countries, particularly those in European, North American, African and Asian regions. The study also highlights the factors responsible for rapid urbanization, such as better facilities for housing, education, healthcare, employment opportunities in the urban areas and their cross-national diversities.

Christopher Rodgers (2020) evaluated essentiality of 'Green spaces' in town planning process, as they provide quality air with freshness in breathing and improved physical activity. The study advocated for preservation as well as rejuvenation of these areas in our urban landscape.

Herman van den Bosch (2020) evaluated the various components of planning policy for smart cities, used across the world for transformation of urban landscape, which includes formulation of ecofriendly and inclusive smart city agenda, that actually applies socio-economic, ecological and suitable technological methodologies.

M. Thondoo et al. (2020), studied concerns of transport planning in developing countries, and focused on public transportation policies in Port Louis City (Mauritius). They study city's the light-metro train system, among other schemes and highlight that there is growing demand from citizens for better provisions for pedestrian walkways and public parks etc.

Hoyce Mshida, Gabriel Malima et al. (2020) by cross-sectional analysis using surveys, spot-checks, focus group discussions, in-depth interviews and structured

observations; focused on availability of public sanitation and hygiene facilities and influencing factors in small towns of Tanzania. The study revealed inequitable distribution and sub-optimal availability of sanitation facilities as well as prevailing differential hygiene practices influenced by demographic, cultural and economic factors.

Liam Heaphy and Alan Wiig (2020) analysed development of corporate townships and their concerns in United States and Ireland, focusing on governance and spatial planning models adopted in these urban renewal projects to create high value clusters by global tech firms leveraging digital and civic investment. The study argues concerns of uneven development, restriction of democratic process and curtailment of public benefits from these smart city interventions due to corporate competition and emerging politics.

Dr. Ruchi Chowdhary and Anjna Kumari. (2019), in their research paper explore correlation between development of cities and other urban regions, and increased avenues of financing and investment opportunities, especially the impact of institutional reforms and devolution of authorities to urban local bodies, on attracting private investments for local development financing in urban planning. The study argues that better devolution of powers to ULBs for localized planning along with institutional support for generating private investments for urban development, leads to better outcomes in terms of infrastructure development and public services.

K. Farrell and P. Nijkamp (2019) studied socio-economic development paradigms in urban regions of India, Nigeria and China. The results reveal a certain degree of heterogeneity among national urban systems thereby emphasizing caution against adopting 'one size fits all' approach.

I.Stojanovic et.al (2016) analyzed impact of Good Governance reforms on achievement of SDGs enunciated as core concern in any development policy. Based on cross cultural evidence from multiple countries, they concluded that instead of universalisation of "one-size fits all" approach, models of governance and sustainable development be tailored according to specific needs of diverse cultures and nations.

Moinuddin G. (2013), analyzed effectiveness of urban planning initiatives in developing nations, and emphasize efficient, effective and responsible management of basic urban services. Urban management in these countries, is facing challenges of limited expansionary opportunity, elected authority's inadequate autonomy in decision-making etc.

S. M. Rasoolimanesh et. al (2013) presented core success factors for effective implementation of urban development and governance reforms as- stakeholders' consensus for reformation, participatory planning, impactful leadership, supportive national policy, financial resources, long-term partnerships, among others.

McCormick Kes, Anderberg Stefan et al. (2013) in an attempt to create urgent awareness about responding to effects of climate change as well as ensure sustainability, evaluates sustainability in urban planning emphasizing structural transformations with holistic integration of sustainability and town planning processes.

T. G. Engida & John Bardill (2013) analysed the impact of NPM on public sector reforms in some selected African countries. They argue that chief characteristics of NPM approach like minimal government, de-bureaucratisation, decentralisation, market orientation of public services, contacting-out, privatisation and performance management; with selective adoption in context of regional needs; are helpful in rejuvenating public sector for quality service delivery.

M.S. Akhter et.al (2009) evaluated performance of Dhaka City Management Program using Urban Development Indicators for measuring effectiveness of civic services such as public health and safety, town planning, building regulation, street lighting, disaster management, heritage development, licensing, certification facilities and ease of doing business through *Citizen Report Card*- An initiative for performance appraisal of urban development and governance services.

Peter Blunt (1995) also echoes same concern about universal applicability of governance and sustainable development mechanisms, and supports inclusion of cultural leanings into developmental policies.

2.3 Sustainable Development and Town Planning in India

The symbiosis of autochthonous planning paradigms and extraneous sustainability schemas within the Indian subcontinent, constitutes an intricate epistemological terrain. Contemporary academic exegesis illuminates the juxtaposition of indigenous urban praxes against imported ecological frameworks. India's polymorphic urban centres undergo ceaseless transmutation amidst precipitous metropolitan expansion. Comprehensive review of existing literature articulates the fundamental quandary of harmonizing anthropogenic exigencies with biospheric preservation imperatives. Avant-garde research elucidates decentralized governance architectures that transcend compartmentalized interventions. Policy efficacy remains predicated upon nuanced calibrations acknowledging socioeconomic stratification while catalyzing metamorphosis toward urban resilience, as a quintessential crucible wherein vernacular wisdom and global sustainability precepts converge in dialectical tension.

India is rapidly urbanizing, and is selected among the fast-urbanising countries. Various urban development schemes like AMRUT, JNNURM, PMAY(U), SBM-U, NUSP, HRIDAY, NULM & NUTP are implemented at national and regional levels. But impact of these initiatives is yet insignificant due to skewed policy approach and lack of inter-institutional co-ordination in implementation of these reforms.

Bhadane Pratibha, Jain Rakesh, Menon Radhika and Patil Shivaji (2023) in their study, using a case study approach of Mohol District of India, aims to evaluate different planning standards as implemented by different states of India, in context of their effectiveness on promotion of urban development paradigms in these respective regions. The study emphasizes using a comprehensively modified planning standard for holistic rejuvenation of small urban towns, as the proposed model enables flexibility for incorporation of localized changes as per aspirations of local population.

Sayan Kumar Roy (2023) in his paper analyses role and impact of national flagship urban planning initiatives such as AMRUT Mission, in transformation of urban landscape in state of West Bengal. Using Barddhaman Municipality for case study, the study argues utilization of effective urban planning approaches for promotion of

infrastructure development as well as delivery of basic public services, through political decentralization, administrative delegation, local financing and participatory planning approaches.

Singh S; Dhote K. K. & Kumar S. (2023) in their study focus on management of water in urban regions, including central Indian towns and cities, and highlights the challenges and concerns of water management. This study advocates for assessment of public satisfaction about water management and participation of community for making decisions regarding water sustainability in urban India.

Tirumala R. D. & Tiwari P. (2022) analyze challenges of availability and affordability of drinking water in cities and towns of India, especially the impact of water usage charges on household expenditure of lower income groups. The study observes wide range of disparities in water user charges, and advocates for integrated water management policies in urban planning, to ensure accessible and affordable water services, particularly to urban poor.

R. S. Kumar (2022) analyses performance and impact of AMRUT mission in Barddhaman Municipality of the state of West Bengal, for the period 2015-2020. The study highlights importance of recent urban planning reforms, including AMRUT scheme to transform urban areas, developing vibrant physical and socio-economic infrastructure in these urban regions i.e. cities and towns, and role of such urban development reforms for promotion of basic civic amenities in urban areas.

Pratibha Bhadane, Radhika Menon et. al. (2022) in their research paper assesses the status, progress and impact of different town planning programmes as implemented across India, especially with reference to effectiveness of planning standards to achieve desired outcomes, with flexibility for investment planning and adaptation of modifications during implementation phase. The study, citing examples from few selected towns of Maharashtra region, aims to provide holistic evaluation of adapting various town planning approaches.

Suvechha Ghatani (2021) explore concerns and challenges of urban water management in Darjeeling Hill town in context of rapid urbanization and associated imbalance between water demand and supply along with resultant public anxiety and uncertainty for access to daily water needs.

Ashraful Alam et al. (2021) have analyzed impact of Corona pandemic on Indian economy, development programs and resource sustainability in realizing targets of sustainable development. The study emphasize need for self-reliance and efficient utilization of available resources as enunciated under 'Aatmanirbar Bharat Abhiyan-Self Reliant India' initiative, to ensure sustainable and optimum socio-economic development.

Tripathi S. (2021) provides deeper insights into development challenges of smaller towns and peri urban regions in India, and proposes a methodology for proactive development of these regions on the basis of proposed 'infrastructure index', which measures development needs under domains of infrastructure, economic development, environmental aspects, historical importance and administrative factors. The study suggests integrated development of smaller towns, to ensure equitable and sustainable development, and ease the population burden of larger cities.

Chatterjee Amit (2021) provides valuable perspectives about urban development of civilian areas in Indian Cantonments, challenges of implementation for various urban welfare policies and schemes in these areas, and impact of such public welfare schemes and development policies on urban planning of these cantonment areas. The study cites lack of funds and poor institutional coordination, as major challenges of these areas, and emphasize prioritization of development of cantonments as vital part of urban planning.

Debolina Kundu and Arvind Pande. (2021) in their research study highlight the implementation challenges of urban development policies in India, including the AMRUT Mission in the context of capacity building of human resources and strengthening of governance institutions, especially devolution of optimum functional and financial autonomy to ULBs, adoption of modern ICT interventions to realize

optimum planning of cities and towns, as well as facilitation of basic public services by technology-enabled platforms, and using bottom-up approach in urban planning process.

Bandyopadhyay P. (2021) evaluates challenges and impact of climate changes in Indian context, and India's preparedness to mitigate these urban planning and inclusive development concerns, especially in relation to policy commitments towards achievement of targets specified under SDG-13, which mandates formulation of a vibrant climate action plan. The study emphasizes incorporation of climate action agenda into the rural and urban planning reforms and development policies, with vibrant and sufficient financial support.

Gupta K. (2020) explores India's preparedness in combating emerging climate changes, including frequent flash floods, challenges in formulation and implementation of an integrated urban flood resilience plan, mechanisms to improve storm water drainage networks, and mitigation of urban floods amid incessant rainfall. The study emphasized incorporation of vibrant flood resilience frameworks in urban design and development policies.

Aravindan, Archana, Narayanan, Suresh & C. B. Prasanth (2020) provide multidimensional perspectives about urban planning of major cities and towns of the state of Kerala, implementation challenges and impact of various urban development reforms such as AMRUT mission, and the need for vital urban development reforms to facilitate physical and socio-economic development of urban regions as drivers of economic growth and major contributors of GDP.

Biswas A. & Mhetre A. S. (2020) analyze the role of sustainable development goals in urban planning, need for inclusion of inclusivity and sustainability in cities and towns, especially as per the targets enunciated under SDG-11. The study also evaluates performance of Indian states and Union territories in context of achievement of targets under the SDG-11, and concludes by emphasizing re-orientation of urban planning reforms to fulfil targets set under SDG 2030 Agenda.

Saritha S. Vishwanathan & Amit Garg (2020) analyze India's preparedness to meet the commitment of Paris Climate Change Agreement to fulfil mitigation of global GHG targets of 2 °C through Nationally Determined Contribution (NDC) by gradually moving away from fossil fuels and transform energy systems towards renewable energy and enhanced energy efficiency (EE). The study emphasizes energy reforms like increasing renewable energy generation, nuclear energy and energy investment.

P. Suresh Babu (2020) analyzed growing demand for land acquisition in urban areas of Navi Mumbai and Greater Noida, its impact on, agricultural land, green cover and environment and challenges of urban planning in ensuring sustainable and affordable urban social infrastructure including open spaces and green belt development in these cities. The study also explored initiatives taken by urban development authorities to provide optimum civic amenities.

S. Singh, S. M. Tanvir Hassan et al. (2020) explore interrelationship between scarce water resources, supply networks, paced urbanization, and impact on water resources due to increased tourist footfall in Himalayan region. The study suggests that prime reason for deficiency of basic urban services in these hilly resorts, is due to their non-inclusion into the urban regions as per census criteria. The water scarcity concerns are primarily due to- water governance issues, skewed urban planning and adverse impacts of climate change. The study advocates for long term sustainable water conservation solutions for a lively and healthy future.

Sarkar. R. (2019) evaluates demographic impacts of urbanization in India and their inter-relationship, during the period 1991-2011. The study suggests that paced urbanization has led to reduced rates in fertility and mortality, as well as other positive correlations and significant impacts on other demographic indicators such as, population growth, migration, density, per capita income, female participation in workforce etc.

Aijaz Rumi (2019) analyses nature, issues and concerns of town planning as well as development in semi-urban areas of India. With rapid urbanization and lack of amenities in cities and towns, people are increasingly migrating towards peri urban

areas, which has led to unplanned and skewed urbanization of these regions with lack basic public services.

Manob Das & Arijit Das (2019) analysed relationship between urbanization and environment challenges focusing on impact of rapid urban expansion on ecological landscape in Malda town of West Bengal, India using indicators LULC, ESVs and global Value Coefficient (VC) for time period 1990 to 2017. The study emphasizes adaption of urgent ecofriendly measures in urban planning to ensure sustainability.

Bhagat R. B. (2019) discusses various facets of India's urbanization, its nature, pattern, components, challenges and impact on sustainable development of urban regions. The study highlights the challenges of paced urbanization, such as blurred demarcation of rural and urban landscape, inadequate devolution of authority to urban local bodies, and insufficient technical, financial and human resource support for ULBs.

Sharma Kapil & Jain Siddharth (2019) comprehensively analyze generation, collection and challenges associated with Indian strategies of urban waste management. Through comparative study of waste management strategies of various countries, provides vital suggestions for proactive waste management. The study highlights several prime concerns of waste management such as, lack of facilities to segregate waste at source, collection of waste at doorstep, technological interventions for waste recycling, etc.

Russell M. Smith, Prasad Avinash Pathak and Girish Agrawal (2019) explore India's Smart City Mission through analysis of project proposals submitted by various cities in context of Mission guidelines highlighting key strategies chosen. The study reveals that most of cities have adopted projects relating provision of basic civic services instead of embracing smart city concepts, mandating urgent intervention of stakeholders to ensure fulfilment of Mission objectives.

Isher Judge Ahluwalia (2019) analyses features of Indian federal structure, political decentralisation, transfer of authority to local government institutions, thereby facilitate sustainable and paced urban development by implementing national and regional

flagship urban planning missions and programmes. The study emphasize boost in public-private partnership to strengthen economic base of local urban bodies and facilitate investment for urban development initiatives.

Rupak Das & Debabrata Das (2019) evaluate multi-dimensional perspectives of sustainable development, its focus, urgency and scope in urban planning as well as status of Indian initiatives to achieve targets set under SDG mechanism, like alleviation of poverty, affordable housing for all, cleanliness, waste management and environment conservation.

S. Anitha, V. Ramesan & S. Parisicha (2019) through a published book, provide proceedings from a national level workshop regarding review of twenty-five years progress of 74th Constitutional Amendment Act and assessment of its impact on empowerment of local urban bodies. This book reflects the implementation of constitutional reforms and public policies such as sluggish institutional coordination, financial support for inclusive development programs etc.

Purva Sharma (2018) evaluates evolution of urbanizing processes regarding Indian scenario and impact assessment of town planning policies on socio-economic transformation of urban regions. The study also, highlights the challenges due to rapid urbanization trends particularly on urban ecology and need for effective urban planning policies to facilitate sustainable and inclusive urban development in towns and cities.

Murugaiah V; Shashidhar R. and Ramakrishna V. (2018) analyze objectives, guidelines and progress of India's prominent urban planning reforms- Smart Cities Mission and AMRUT, and their impact on social transformation in urban regions. This research study, highlights the progress of multiple smart city projects and AMRUT schemes, and emphasizes for regional disparities in these reforms in context specific regional geographies, culture, heritage and ecology.

Nandy S. N. (2018) evaluates pace and nature of urbanizing tendency in Indian context, the determinants of migration of people from rural to urban regions, the challenges and concerns of urbanization, the rise of urban slums, and the need for proactive and

integrated urban planning, to facilitate sustainable development in the urban landscape. The study emphasizes structural and operational shift from smart development towards sustainable development of cities and towns.

Dkhar N. B; Bharat G. K. & M. Abraham (2018) in a vital publication from a prominent research institute i.e. TERI of India, provide a holistic view and detailed information about concerns of managing waste and sanitation in India's rural regions as well as urban neighbourhood. The study also emphasizes linkage between SDGs and sanitation management, to advocate for reforms in rural and urban planning paradigms, in line with SDGs framework.

Mihir Bholey (2018) evaluates challenges of urban India and impact of urban planning policies in ensuring urban transformation by analysing successive policies of planning commission. This study emphasizes that these urban reforms should be inclusive, viable and sustainable with smart utilization of emerging technologies.

Russell M. Smith & Prasad Pathak (2018) in their research paper analyse problems of urban India, focusing on challenges of increasing population in cities, infrastructure development issues and sustainability concerns. The study also highlights impact of AMRUT Mission and Smart Cities Mission on development of few selected Indian Cities, and provides a road map for future urban planning in context of Indian urban regions.

Alexander Follmann, Gideon Hartmann and Peter Dannenberg (2018) through field mapping, spatial data analysis and semi-structured interview techniques traced challenges of urban sprawl, uneven urban development and unplanned urbanization exercises in India focusing on urban development challenges of Faridabad city of Delhi. The study suggests optimum use of land spaces and GIS mapping for sustainable and inclusive urban planning.

Rattani V. (2018) provides vital and detailed perspectives about Indian national plan of action to cope with climatic changes. This study provides insights into various

national flagship development reforms aimed at incorporation of ecofriendly and sustainable paradigms in urban planning process.

Aman Randhawa & Ashwani Kumar (2017) explored focus of India's urban development initiatives like Smart City Mission and AMRUT to boost sustainability in urban infrastructure, institutional efficiency, energy self-reliance, smart technological innovations in utilities services and mitigation of environment degradation. The study suggests revisiting of development policies to prioritize resilient and sustainable urban landscape.

I. Haque & P. P. Patel (2017) examine the nature, patterns, trends and determinants of metropolitan growth in India, especially in post economic reforms period, which facilitated industrialization and subsequent paced urbanization. The study argues that the urban regions near to regional capitals, as also the cities and towns on rivers' embankments, and cities with better quality of basic public services, have witnessed faster urbanization trends. It emphasizes equitable distribution of resources for balanced and inclusive development.

Ashwani Kumar & Push Plata (2017) analysed issues and impact of prevailing building permission regulations in Shimla city of Himachal Pradesh in context of regional topography, plot proportion and environmental challenges associated with unplanned regulations.

Pankaj Bahadure, Sarika Bahadure (2012) through extensive analysis of existent means of resilient urban development in India; aims to emphasize urgency for sustainable development of cities and towns to address challenges of sustainability, spatial planning, governance, deficiencies and execution. The authors suggest need for holistic urban planning approach to develop resilient and sustainable towns and cities.

Sushma Yadav (2010) analysed key concerns of public policy and governance in India emphasising proper implementation of public policies, as skewed implementation has resulted in sluggish economic growth and human development. The study suggests

separation of policy making and policy implementation and proper decentralisation of authority to ensure optimum public policy implementation.

Ramakrishna Nallathiga (2009) while comparatively analysing various urban development reforms with reference to Mumbai city, advocates adoption of Vision Planning instead of existing Master Plan approach due to various limitations in Master plan Approach such as its static nature, lack of proper implementation guidelines, lack of financial monitoring, non-participatory approach and absence of long-term vision and planning process.

2.4 Sustainable Development and Town Planning in Jammu & Kashmir

Due to peculiar geography and topography, strategic geographical location, particular climatic conditions, scarcity of socio-economic resourcefulness, rising drift towards non- agrarian employment and concerns of public peace; the region of Jammu and Kashmir is facing unique development concerns and challenges in implementation of socio-economic development reforms, providing optimum public service delivery mechanisms and ensuring sustainable urban development. Due to increased rural-urban migration, exponential population growth and scarcity of civic amenities in towns, the district is facing challenges of inadequate housing, water management, sanitation, drainage, lack of open spaces, under-developed roads & pathways.

Prime reasons for unplanned and insufficient urban development are inter-institutional coordination issues, hostile climate and lack of integrated town planning approach besides absence of analytical research studies in evaluation of implementation challenges and impact of urban development and town planning initiatives undertaken in district.

Khan M; R. Reshi et al. (2023) analyze development of urban slums across the multiple districts of Jammu and Kashmir, evaluating accessibility to vital civic facilities, like drinking water supply etc. This study suggests that unplanned urbanization and alarmed growth of urban slums, has led to inadequate water and sanitation services in urban regions of UT of Jammu & Kashmir. This study advocates

for reforms in urban planning policies and development paradigms to provide optimum basic services to slum dwellers.

Goswami P. & Panda G. (2022) attempted to trace and analyse the status and impact of social sector reforms, mechanisms for delivery of public services as well as governance paradigms in Jammu and Kashmir, especially in era of post abrogation of the articles- Article-370 and Article 35-A, articles which provided for special status of the erstwhile state, and constrained the direct implementation of central laws in the region. The study while evaluating the services of drinking water in Jammu and Srinagar, advocates for augmentation of governance networks in the region with adequate financial assistance from the central government, to usher an era of inclusive and sustainable development in the region.

Shivam Singh et al. (2021), examines present status of AMRUT scheme through evaluation of its working in Jammu & Kashmir as well as its role in facilitating socio-economic development and citizen empowerment. This study advocates that this scheme aims to develop the urban regions by developing resilient physical infrastructure and facilitation of impactful public services etc.

Gagan Deep & Rakesh Menia (2018) trace history of urbanising process in the region of Jammu and Kashmir, during 1901-2011 time period, and exploring factors of rapid urbanizing tendency in this UT. The study also highlights issues of drinking water, electricity, transportation facilities and environmental pollution.

Chowdhary S. (2018) provides detailed insights about nature, pattern, pace and challenges of the urbanization in Jammu & Kashmir. It suggests that urbanization in the UT of J&K, is alarmingly increasing, in a haphazard and unplanned manner, without policy focus towards conservation of fragile urban environment and sustainable development, which has led to immense urban development challenges in major cities and towns of the region.

Khan K. A. & Mondal N. A. (2018) traces population increase, urbanization pattern, as well as development of small, medium and large towns and cities of Jammu & Kashmir, during the period 1961-2011. The study suggests paced urbanization of some towns during the period, having inadequate provisions for basic amenities in these towns as compared to large cities. The study emphasizes proper planning of smaller towns to facilitate equitable development.

Jahangeer A. Parry et. al (2018) studied urban land suitability, concerns of rapid urbanisation and other development challenges regarding Srinagar and Jammu cities using AHP model; to suggest steps for better provisions of basic civic amenities, balanced planning and equitable distribution of economic resources in urban development.

Ajaz Ahmad Naikoo (2017) traced level of knowledge and awareness regarding environmental education and sustainable development among teachers of secondary schools in Kupwara district of Jammu and Kashmir, surveying 100 teachers in 30 different high schools. The study revealed availability of adequate knowledge pool for the subject of environmental education and sustainable development in the region emphasizing need for universalization of environment awareness in educational institutions.

Rajesh Venugopal and Sameer Yasir (2017) analyzed political narratives, social construction understanding and impact of 2014 devastating floods in J&K particularly in urban areas that affected two million people, through interview technique. This study also highlighted role of central and regional governments, army, local volunteers and media during post flood rehabilitation process.

Mohmad Aabid and Aadil Farooq (2017) traced scope of sustainable development framework in political turmoil affected J&K region with emphasis on analysis of public mental health in conflict situations as vital indicator of psychological well-being and national level health policy making framework as essential part of sustainable development plans.

Mohammad Imran Malik, M. Sultan Bhat and Shahnaz Ahmad Najar (2016) analyzed scarcity, mismanagement and growing demand of water in Lidder catchment area of District Anantnag, using GIS technologies, due to vast tourism potential of the region. The study emphasized use of Multi-Criteria Evaluation (MCE) approach for assessment and effective sustainable management of ground water resources.

Zoya Naqshbandi, Sameer Fayaz & M. Sultan Bhat (2016) analyzed urban population increase as well as its adverse effects on infrastructure development patterns in smaller towns in J&K during period 1981 to 2011. This study reveals ill effects of skewed urban planning in terms of unabated use and subsequent reduction of

agriculture land, wetlands and barren land in towns of J&K which necessitate revisit of town planning approach to ensure optimum eco-friendly urban development.

Javaid Ahmad Tali et al (2012) studied spatial growth issues, land use patterns and ecological concerns in development of Srinagar city. The study traced pace and direction of urban planning in the capital city from 1971 to 2001 highlighting improper development of basic social infrastructure and inequitable distribution of amenities as well as lack of environment planning which led to rising air/ water/ noise pollution, water scarcity and traffic congestions across the city; which need urgent administrative attention from city planners.

2.5 Summary of Literature Review

The review of above research articles provides insights into evolution and prospects of sustainable development as well as regional disparities in progress of urban development & town planning reforms across various countries including India, apart from reflecting challenges of urban development, sustainable development and town planning mechanisms in Jammu and Kashmir. The review explores ecological perspective, regional disparities in implementation of these reforms and need for rethinking of urban development policies and town planning approaches to ensure eco-friendly urban management solutions. United Nations' Sustainable Development Goals (SDGs) initiative has played pivotal role in enforcing adoption of sustainable urban development interventions.

Urban development in India has become vital due to rapid urbanisation, population growth, increased industrialisation, rural to urban migration and lack of basic amenities in towns and cities. Initiatives like Smart City Mission, AMRUT and HRIDAY have kindled hope of urban transformation. But such initiatives need strong political will, strategic planning, inclusive bureaucratic approach, capacity building of workforce, participation of general public in policy-making, implementation as well as monitoring process. 74th Constitutional amendment 1992 has empowered local governance institutions like municipalities to take proactive role in urban development process for which they need proper devolution of authority, sufficient economic resources and policy guidance from regional and federal governments.

Jammu & Kashmir due to distinct topography and other unique features has been lagging on socio-economic development front. The prime challenges to urban development reforms in the Union Territory are corruption, volatile political environment, rising unemployment, lack of private business infrastructure and underdeveloped road infrastructure. The town planning challenges of District Anantnag reflects suboptimal progress of urban development initiatives in J&K, which needs urgent policy intervention to develop eco-friendly urban social infrastructure enabling basic amenities of roads, health centres, educational institutions, open spaces, fire service stations, sanitation and waste management facilities.

2.6 Research Gap for the Study

Most of available literature provides different perspectives of sustainable development and town planning practices at global level and only a few research studies have been conducted to trace disparities in implementation of urban development and town planning reforms at regional level, and to analyze impact of regional aspirations and needs on town planning processes. Although significant research studies are conducted globally and in India to analyze town management policies, however, no such research has been conducted in Anantnag district of Jammu & Kashmir, despite the region facing immense urban development and town planning challenges, especially in terms of implementation of ecofriendly and sustainable development paradigms. The comprehensive review of available literature sources suggests critical research gap in context of town planning in Anantnag Municipal Council Area of Jammu & Kashmir.

As such, the present research study aims to fulfil this research gap by analysing effectiveness of adapted urban development and town planning approaches, particularly the impact of national flagship urban planning initiative- AMRUT scheme in ensuring environment-friendly town planning in the Anantnag Municipal Area of J&K, as well as highlight the challenges of town planning and implementation of AMRUT scheme in this particular region, apart from focussing on efficacy of AMRUT scheme in realizing the targets under SDG-11 in the Anantnag Municipal Council Area of Jammu & Kashmir.

The present analytical study will provide new insights into working of public institutions in Jammu & Kashmir, increase knowledge base about urban development and town planning initiatives implemented by central regimes and J&K's regional administration, like AMRUT scheme. The holistic findings and suggestions as outcome of the present study will also facilitate deeper insights regarding sustainable development and urban planning, by giving new insights into practical application of concepts from public administration and development studies, that will aid future researchers, policy planners as well as administrative practitioners, both at regional and national levels as well as global level.

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CHAPTER-3
THEORETICAL FRAMEWORK

Contents in the Present Chapter

3.1 Brief Introduction

The present chapter aims to explain theoretical basis of the present study, including the underlying concepts of urbanization and town planning. The chapter also provides comprehensive insights about meaning, definition and importance of these vital domains of urban development and planning, evolution of urbanization and town planning, as well as description of various related theories of urbanization and town planning, especially in context of the present research study. Also, the emerging challenges of urbanization and town planning, are briefly discussed in this chapter, more so in view of global impacts of paced urbanization, climate change and global warming, increasing hunger, housing congestion in urban areas, scarcity of drinking water and other vital basic urban services, challenges of waste management and sanitation, as well as emergent need for adoption of innovative and sustainable town planning solutions.

Salient among these challenges is the accelerated pace of global urbanization, precipitating multifarious repercussions. The anthropogenic perturbation of climatic equilibrium manifests in urban microclimates of unprecedented thermal intensity. Concomitantly, nutritional insecurity burgeons, while residential congestion in metropolitan precincts engenders deleterious sociological ramifications. The paucity of potable hydraulic resources and other indispensable municipal amenities constitutes an exigent crisis. Similarly, the efficacious management of municipal detritus and effluent presents formidable logistical and environmental conundrums. These predicaments collectively underscore the imperative for innovative, sustainable approaches to urban planning.

The exposition posits that integrative, forward-looking strategies for metropolitan development must transcend conventional paradigms, embracing instead holistic methodologies predicated upon environmental stewardship, social equity, and economic viability. Only through such transformative approaches can the inexorable tide of urbanization be channelled toward salutary outcomes for both human inhabitants and the biospheric systems upon which their existence ultimately depends.

3.2 Urbanization (Meaning, Evolution, Theories and Challenges)

3.2.1 Meaning of Urbanization

Urbanization means gradual but paced increase of population residing in urban regions i.e. cities, towns or semi-urban areas around peripheries of a city. This paced increase in urban population occurs due to persistent inflow of people from rural areas i.e. villages towards towns and cities. However, urban population can also increase due to natural reasons when birth rates exceed normal death rates in urban population. The definitions of a town, varies across the countries and depends also on used population measurement standards (T. Bodo, 2019). Every country adopts its own standard and criteria to define and explain an urban area, and it depends also on distribution of population (Satterthwaite, 2005). In an unprecedented manner, ever increasing percentage of population now resides in urban areas, in towns and cities, and it subsequently leads to rapid population growth in these urban regions (UN, 2007). However, the issues and challenges associated with such alarming levels of urbanisation are huge and scary, such as poverty, environment pollution & declining quality of life (Chen, 2007).

3.2.2 Evolution of Urbanization

The process of urbanization and people's migration towards urban regions, searching for better livelihood opportunity, has been going on across the world for centuries now. As the human civilization advanced in ancient times and man realized importance of living jointly in groups as safeguard from natural disasters, as well as learning basics of agriculture techniques, people also started shifting towards plain regions to establish formal trade centres and other essentials of a primitive urban life, thus laying foundations for the modern-day cities and towns. The earliest traces of urbanization in South Asian context, are predominantly found in urban centres of Harappa and Mohenjo-Daro, where people had developed well organized urban regions, constructed systematically structured basic urban utilities such as housing facilities, drinking water services, drainage networks, ponds and dams for rain water storage, roads and lanes, educational institutions and trade centres among others.

The journey of urbanization progressed along with intellectual and technological advancement of human civilization, especially because of unprecedented industrial revolution in nineteenth century and impact of subsequent competitive imperialistic policies of developed countries, who established new trade centres and urban clusters in colonized nations to promote trade and commerce activities in line with needs of western industries. Such urban clusters were developed in Asian and African countries and are still existing as historical monuments and cultural heritage, such as development of cities like erstwhile Madras Presidency, Bombay Presidency, Bengal Presidency and Delhi capital territory etc.

The contemporary urbanization has also its genesis in subsequent liberalization periods, freedom movements and creation of new independent countries in twentieth century, when most of the erstwhile colonized nations got independence from imperialism and governments of these countries majorly focused towards public welfare in both rural and urban landscape, and established new towns and cities with augmentation of basic urban facilities.

However, with ever increasing population in urban areas coupled with paced shift of residents from rural regions towards towns and cities, urbanization is posing a critical challenge for urban planning and governments across the world are implementing innovative urban planning models and policies to mitigate these challenges.

3.2.3 Theories of Urbanisation

The emergence of urbanization literature and theories got facilitated due to increased concern of social scientists & researchers about population growth in cities & towns and subsequent deficit in availability of basic public services in urban areas. The available literature on the theories of urbanisation highlight causes and patterns of urbanization, as well as trends and patterns in distribution of urban population in different countries, and development of urban clusters.

A) Modernization Theory

This theoretical framework of urbanization has been evident and effective during 1950 AD-1970 AD, and advocates that urbanization comes as outcome of social change,

incorporating new ideas, new approaches and innovative paradigms, due to modernization and industrialization, wide spread adaptation of technologies, as also diffusion mechanism in allied cultural manifestations (Smith, 1996). It asserts that in urbanisation, every society aims for modernization, adopting new social elements, and incorporating emerging technologies and tools to reshape social structure. Current status of urbanizing tendency across the countries, is actually gradual metamorphosis of initial phases of modernization and subsequent start of urbanization (Kasarda and Crenshaw, 1991).

Societies advance due to technology driven socio-economic growth, with increase in agricultural productivity by using latest agricultural tools, reduction in manual labour due to adoption of mechanical equipments, and most essentially increasing pace of work culture and time efficiency (Lenski and Nolan, 1984; Nolan and Lenski, 1985). This theory assumes that technological advancement is precursor of social change, leading to urbanization. As per Kasarda and Crenshaw (1991), most of the social scientists and thinkers attribute urbanization more towards technological advancement and modernization through industrialization as compared to capitalization. Some thinkers also possess view that modernization promotes diffusion of cultures and leads to non-uniform socio-economic development, thus breeding out class-systems in societies, particularly in social setups of under-developed nations (Hawley-1981, Kasarda and Crenshaw, 1991).

Some theorists advocate regarding such type of urbanising processes to have got started due to amalgamation of socialistic services as well as development programmes of few selected parts of societies, due to racial, ethnic, cultural, religious factors as well as corruption practices, that resulted in today's socio-economic inequalities across the globe (Alonso, 1980). Because of richness of few selected people who can afford huge investments while residing in central parts of particular societies, a huge drift of rural population towards urban areas takes place, a phenomenon known as 'rural push and urban pull' because of dynamic socio-economic processes (Berliner- 1977, Kasarda and Crenshaw-1991).

B) Theory of Urban Bias

Social scientists like London and Smith (1988), Lipton and Bradshaw (1977), are main proponents of this urbanization approach. Lipton compared data of 63 least developed countries and 9 developed nations, and after thorough analysis, proposed that socio-economic disparity between rural and urban population is more prominent in least developed nations, as their governments attempt to impose taxes on business and vital economic sectors like agriculture, while as the governments of richer nations facilitate subsidies into critical economic sectors like agriculture (Lipton-1977, Dixon and McMichael-2016).

This phenomenon was attributed as 'Cultural Parasitism', in which poor rural population is being deprived of basic necessities, and rich urban population enjoy cheap rural goods and live in well-built urban structures, enjoying taxation revenue generated in rural settlements (Dixon and McMichael, 2016). Such a bias in development process to favour urban population creates socio-economic inequality between villages and towns, in every sphere of economic activity and productivity, like production and use of goods, individual incomes among others, which subsequently leads to mass migration of rural population towards cities and towns in search of better livelihood opportunities (Bradshaw-1987, Corbridge and Jones- 2005).

This socio-economical deprivation and increased poverty in village and rural settlements, is outcome of this undue urban bias (Lipton, 1977), due to non-formally distributed socio-economic benefits between population of particular country, a situation wherein maximum developmental projects are concentrated as well as maximum agricultural and industrial reforms are taking place in the urban regions only, hence, forcing poor rural population for migration towards urban areas, in search of better food quality, better healthcare, educational services and personal safety (Lipton-2005, Bates-1981).

These urbanization thinkers assume that socio-economic upliftment of rural population is stalled due to self-interests of some urban population groups who use pressure tactics to obtain their undue benefits from governments, due to their proximity to government institutions (Ades and Glaeser, 1994). Such a socio-economic dynamism in third world

nations, being entirely biased towards urban population, is engrained in socio-political systems of these countries by these urban pressure groups (Varshney, 1994).

C) The Theory of Self-Generated Urbanisation

This approach in urbanization advocates that urbanization is facilitated due to increase in surplus socio-economic resources and enable livelihood of urban population across several diverse economic spheres (Hawley, 1981) and attaining such socio-economic prosperity that some communities and population groups work independently (Bodo-2015, Lampard-1965). Such type of urbanization is thought to have taken place during neolithic periods when first urban clusters were developed in middle eastern regions. As such, this theory also advocates industrialisation and modernization as prime catalyst and promoter of this type of urbanization because of rapid inflow of rural people into cities and towns.

Before Britain's rapid industrial revolution during twentieth century, social theorists advocate that no previous society could be categorized as full urbanisation. Subsequently, western nations started to ensure industrialisation and urbanized rapidly, that had after effects in other third world countries as well, as soon after this unprecedented industrialisation in developed nations, industrialization as well as paced urbanisation followed. Hence, this theoretical framework argues that industrialisation leads to urbanization, and increasing presence of industries in a particular region, means promoting urbanization.

3.2.4 Challenges of Urbanization

Urbanization in the contemporary times is widely debated as 'boon or bane' phenomenon, especially in context of its immense impact on socio-economic development paradigms, people's social behaviours as well as facilities for vital public services provided to citizens in rural and urban regions across the world. As described above, there have been multiple factors responsible for this paced form of urbanization which world is witnessing today, such as exponential population growth in urban areas, increased drift of rural population towards urban areas hoping for better life standards, disproportionate levels of socio-economic and political developments as well as

industrialization which is inclined towards and concentrated in urban regions only, as well as other responsible factors.

Some social scientists and scholars support this paced urbanization process, arguing that because of urbanization, cities and towns across the world have become hub of economic activities and catalysts of growth and development, majorly because of establishment of industrial and business units in urban areas. However, the other scholars oppose this traditional view about urbanization, and argue that urbanization has led to socio-economic disparities among citizens of same countries just because of their location in rural and urban regions, biased infrastructure development in rural and urban regions, neglect of traditional economic activities such as agriculture and major shift of rural population towards non-agriculture employment, as well as scarcity of basic public services, like housing congestion, poor facilities for drinking water services, optimum healthcare facilities, drainage as well as waste management facilities, lack of green spaces and open spaces due to which urban regions are witnessing heat waves, uneven climate patterns, flash floods etc.

As such the major challenges of urbanization in contemporary periods, are as follows-

1. Uneven Development of Rural and Urban Regions

The massive urbanization trends in recent years, coupled with regional bias in development processes more inclined towards urban areas, have led to alarmingly increasing disparities in socio-economic development between rural and urban landscape, which has both cause-effect consequences on urbanization and adverse impact on rural life, as on one hand, this rapid urbanization results in neglect and decreased focus towards development of villages which further alienates the villagers from availing quality life services such as health, drinking water, education, nutrition and employment opportunities, and on the other hand, the same urbanization because of this uneven development, then forces massive rural-to-urban migration, which increases further the already congested urban population, and consequently have its own adverse effects on the urban life.

2. Exponential Rise in Urban Population

As discussed earlier, urbanization means increase in population of urban areas because of two factors- i.e. rise in number of indigenous people of cities and towns as well as

paced rural-to-urban migration of people which further rises urban population exponentially, and such unfavourable population growth has severe impacts on urban resources and facilitation of various vital urban services, like housing, sanitation, drinking water etc.

3. Housing Congestion and Development of Urban Slums

Urbanization leads to disproportionate growth in urban population, and hence scarcity of proper housing facilities for such ever increasing population, which subsequently leads to forced development of urban slums mostly in peripheries of cities and towns with abject living conditions.

4. Scarcity of Drinking Water and Electricity Facilities

Likewise, urbanization has its adverse effects on provisions for drinking water and electricity services in urban regions, and leads to their scarcity due to gap in demand-supply process.

5. Poverty, Deficient Waste Management and Sanitation Services

Due to forced migration from rural landscape towards urban regions in search of better livelihood opportunities, and subsequent skyrocketing inflations in availing basic urban services such as proper housing, a major chunk of urban population is forced to live in urban slums with poor waste management and sanitation services. Such urban population also face immense poverty due to immense pressure on employment avenues because of increased population, and usually do menial jobs on daily wage basis.

6. Increased Urban Pollution

Due to increased population in cities and towns, urbanization also results in alarming levels of water pollution, air pollution and noise pollution in urban areas, choking of water bodies due to throwing of household waste into rivers and streams, increased use of motorized transport services having immense particulate emissions, and high decibel noise levels in congested urban markets and other public spaces.

7. Poor Public Transportation Services

Rapid urbanization also leads to scarcity of public transportation facilities in cities and towns, as availability of limited transportation facilities in terms of public buses, autorickshaws and contract carriage vehicles, doesn't meet public demand of ever-increasing population, and force the residents to use their own transport options, which further affects the transportation services due to frequent traffic congestions and increase in pollution levels.

8. Social Effects of Urbanization

Urbanization has its own effects also on social life of urban population, in terms of family bonding, kinship relations, adjustment in new social patterns usually in strange neighbourhood, connections with rural hereditary relations, and in terms of caste issues, as well as women empowerment concerns in urban life style, among others.

9. Urban Crime and other Vices

Another less talked about but most critical impact of urbanization, has been the unprecedented increase in urban crimes such as robbery, knife attacks, jewellery snatching, thefts, drug addiction and other anti-social vices, due to alarming increase in urban population, which becomes very difficult for law and order agencies to control on and minimises the role of civil society as well to curb such activities, as urban population is always such diverse that it becomes immensely difficult to duly recognize such anti-social persons.

In scrutinizing the nexus between India's burgeoning urbanization and the Atal Mission for Rejuvenation and Urban Transformation (AMRUT), one discerns a symbiotic relationship predicated on addressing the exigencies of rapid urban expansion. The accelerated pace of urbanization in India, characterized by transformation of rural territories into urban agglomerations, has engendered multifaceted challenges in infrastructure and service delivery. AMRUT emerges as a perspicacious policy response, deliberately calibrated to ameliorate these urban pressures. The scheme's cardinal focus on water supply, sewerage, and urban mobility demonstrates prescient recognition of urbanization's foremost implications.

The correlation manifests most prominently in AMRUT's strategic prioritization of 500 cities, acknowledging the hierarchical nature of India's urban transformation. As metropolitan peripheries expand and secondary cities burgeon, the scheme's emphasis on basic infrastructure assumes paramount significance. The initiative's allocation methodology, which considers urban population metrics, reflects a nuanced understanding of urbanization patterns. Notably, AMRUT's reforms component exhibits remarkable consonance with urbanization trajectories. By mandating institutional reforms in urban local bodies, the scheme addresses the governance imperatives of expanding cities. The emphasis on municipal bonds and public-private partnerships acknowledges the fiscal demands imposed by urbanization. However, the relationship is not merely unidirectional. While urbanization necessitates AMRUT's interventions, the scheme's implementation catalyses planned urban development, fostering systematic city expansion rather than haphazard growth. This recursive dynamic underscore the intricate interplay between policy intervention and urban evolution in contemporary India.

3.3 Town Planning (Importance, Objectives and Theories/ Models)

3.3.1 Meaning of Town Planning

Town planning refers to development and design of urban regions in peri-urban spaces and towns, focusing towards proper and effective use of available land, developing vital urban infrastructure, such as drainage, roads, facilities for waste management, optimum educational facilities and healthcare services, electricity, proper drinking water, development of peripheries and slum areas, as well as ensuring accountability, transparency and responsiveness in town administration frameworks.

With ever increasing population in urban areas because of exponential rise in urban population, shift of rural people towards urban regions to avail quality education, livelihood opportunities as well as life quality, the urban regions through the world, are attempting to mitigate several development challenges, such as issues of non-availability of proper housing facilities, issues of environment pollution etc. It is

estimated that world population in urban areas will increase by another 2.5 B people by 2050 AD (UN, 2018)[1].

3.3.2 Importance of Town Planning

Town planning has emerged as vital concern of urban development in recent times, due to ever increasing population in urban and semi-urban regions, and deficient public infrastructure and public services in towns, due to lack of effective and sustainable town development frameworks.

Due to skewed town planning approaches, towns face several types of development issues, as follows-

1. Poor road networks and public transportation systems, with damaged roads and lanes, as well as poor public transportation facilities.
2. Unplanned growth of industries, leading to their concentration in few selected areas.
3. Deficient traffic management, particularly during peak office hours.
4. Lack of community parks, open spaces, green areas and play grounds in urban regions.
5. Scarcity of natural resources and vital facilities such as drinking water, electricity, waste management etc.
6. Noisy atmosphere, as well as water pollution and air pollution.
7. Uncontrolled development of towns.

As such, development of proper town planning frameworks and policies has become critical than ever, to uplift urban landscape in these semi urban regions and provide optimum basic urban services to town dwellers.

[1] https://www.un.org/en/desa/around-25-billion-more-people-will-be-living-cities-2050-projects-new-un-report

3.3.3 Objectives of Town Planning

As per several legislations regarding town planning, there are three major targets and objectives of an effective framework for town planning, that are summarized in three words, viz- Health, Convenience as well as Beauty.

1. **Health-** Development as well as promotion of healthy life standards, along with provisions for clean environment in which all public lives freely, work peacefully, play joyfully as well as get relaxed. It also involves choices for optimum use of available land, in an orderly manner and checking encroachment tendencies of different town zones aiming to encroach over some other zone's land.
2. **Convenience-** It includes better facilities for basic public services, such as drinking water, educational facilities, healthcare services, housing facilities, development of public transportation facilities, including revival of road infrastructure etc.
3. **Beauty-** It involves preservation and protection of unique identity of individual town zones, as well as their natural environment, climate, plantation, aesthetics, building architecture, especially in context of heritage buildings, religious places and cultural places etc.

3.3.4 Theories/ Models of Town Planning

There are several theories and models available in context of town planning, as conceptualized by several development theorists, scholars and policy makers. Some vital town planning theories and models are described as following-

1. Garden City Theory/ Model

This model has been given by Ebenzer Howard while analysing reasons for people's migration towards cities, and attempts to solve and reduce social problems. As per this theory, such a city comprises of varied zones, green spaces, and types of streets, with city core at the centre spreading upto 4 kms containing central public park, followed by development of commercial zones, cultural centres and administrative circles, and whole city area to be limited upto 7 kms only with total population size of 32000 people, thus a new city/ town must be developed after very 7km distance in an organized manner.

2. Geddian Trio Theory/ Model

This theory gives a new dimension to development of existing towns, as well as provides new techniques of town planning. As per this model, a town is integration of folk, work and place i.e. in preparing a town plan, we must take into consideration the number and kind of town population, their specific needs for work and place such as housing, educational institutions, office, recreational and other amenities. All data must be analyzed and then developed. His techniques of planning were- survey before plan, plan before development, and observe to understand and understand to foresee.

3. Single Nuclei Theory/ Model

This is a significant model of town planning, under which a city/ town develops outwards from one central point, with centre being its nucleus, is the major part of the city/ town. The major complexes are developed in the centre of the city/ town and other parts of the city/ town originate from the central nucleus.

4. Muti Nuclei Theory/ Model

It emphasizes development of a town planning model, under which a town grows simultaneously from various relatively free points instead of growing from a single central point, and every such point facilitates development of a particular zone such as commercial zone, housing colony etc.

5. Concentric Zone Theory/ Model

This model of City/ Town planning has been developed by Ernest W. Burgess in 1925 AD. In this model, the city grows outward from a unique single central region, land areas are demarcated for different purposes around this central region in the shape of concentric rings, and various city zones are named as per activity within the zone or as per different income groups residing in these zones.

3.4 Relevance of Urbanization and Town Planning Theories

All the above theories of urbanization are much relevant in context of the present research study as they provide diverse perspectives of evolution of urbanization, and impact of various socio-economic and cultural factors on distinct urbanization processes across the societies of developed and developing countries. However, the

‘Modernization Theory’ of urbanization is of vital significance to explore the present research problem and study evolution of urbanization in Jammu & Kashmir region, due to the fact that, as advocated by the ‘Modernization Theory’ several socio-economic and technological advancements in the urban areas of J&K region for several centuries facilitated urbanization processes.

As such, the present study uses ‘Modernization Theory’ as theoretical foundation, to explain the trajectory of urbanization in Jammu & Kashmir region, including evolution of urban development processes, land-use changes over the years, impact of people’s migration towards urban areas, challenges of urban planning in Jammu & Kashmir, and effectiveness of recent government interventions towards urban development & town planning such as AMRUT Scheme etc.

The Atal Mission for Rejuvenation and Urban Transformation (AMRUT) serves as a paradigm-shifting urban development initiative that amalgamates contemporary town planning principles with India's contextual requirements. This comprehensive scheme exemplifies a synergistic approach to urban metamorphosis, primarily focusing on infrastructure augmentation and spatial reorganization. In the realm of town planning, AMRUT's methodology resonates with several established models. It incorporates elements of Howard's Garden City concept through its emphasis on green spaces and environmental sustainability. The scheme's focus on transit-oriented development parallels the principles of New Urbanism, fostering walkable neighbourhoods and mixed-use developments. Furthermore, its approach to infrastructure development aligns with the Smart Growth model, prioritizing compact development patterns and efficient resource utilization.

AMRUT's distinctive contribution lies in its hierarchical implementation framework, where urban local bodies are empowered to formulate area-specific development plans. This decentralized approach facilitates the integration of indigenous planning wisdom with contemporary urban design principles. The scheme mandates the preparation of Service Level Improvement Plans (SLIPs), which serve as microcosmic blueprints for urban regeneration. The scheme's emphasis on water supply, sewerage facilities, and storm water drainage systems reflects the fundamentals of the Functional City concept, while its focus on non-motorized transport infrastructure embodies principles of

sustainable urbanism. AMRUT's holistic approach to urban planning encompasses both physical infrastructure development and institutional capacity building, creating a robust framework for sustainable urban growth.

Through its comprehensive urban planning methodology, AMRUT exemplifies an adaptive model that synthesizes global best practices while addressing India's unique urban challenges.

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CHAPTER-4

RESEARCH METHODOLOGY

Contents in the Present Chapter

4.1 Brief Introduction

Comprehensive details of research methodology as adopted to conduct the research study, are explained here briefly. (Creswell and Creswell, 2018) present a comprehensive framework for selecting appropriate research approaches. They emphasize the importance of aligning philosophical worldviews, research designs, and specific methods to create coherent and effective research strategies for addressing complex research problems. (Maxwell, 2013) offers an innovative "model" approach to qualitative research design that emphasizes the interconnected relationships between research components. His interactive model challenges linear approaches by demonstrating how research goals, conceptual frameworks, methods, validity concerns, and research questions form an integrated system. (Teddlie and Tashakkori, 2009) provide a foundational text on mixed methods research that bridges the quantitative-qualitative divide. Their work establishes mixed methods as a distinct methodological tradition with its own philosophical assumptions, designs, and analytical techniques for addressing complex research questions.

Keeping in view that each particular research study mandates the selection of specific methods, techniques and tools meticulously selected to finalize the sample population, sample size and other field work-related aspects, all the vital components of research methodology in direct relevance and coherence to the research objectives of the present study, were comprehensively evaluated and finalized, that includes detailed insights and perspectives regarding intricacies of research methodology, such as the nature and research type of the present research study, sampling methods adopted in the present study, as well as sample selection of study areas, sample selection of institutions, and selection of research sample from respondents belonging to various stakeholder groups. These respondents in relation to the present research study include, general public as well as other stakeholders directly involved in town planning process as also implementing welfare programs in the region.

Also, vital insights about the types of data sources used for the present research are provided here, such as the sources of primary data as well as sources of secondary data, methods as well as tools of data collection and data analysis, apart from

highlighting overall research methodology framework used to achieve the individual research objectives of the present research study.

4.2 Nature of the Study

This study integrates elements of descriptive inquiry, exploratory methodologies, and analytical problem assessment to exhaustively scrutinize the multifaceted dimensions, ramifications and impediments of urgent socioeconomic exigencies. As previously elucidated, this study aims to conduct a meticulous examination of the AMRUT scheme's various facets, encompassing its comprehensive influence on cultivating robust urban planning mechanisms and enhancing fundamental civic amenities within the Anantnag Municipal Council jurisdiction in Jammu and Kashmir.

The research architecture encompasses five cardinal objectives designed to furnish a panoramic perspective of the investigative dilemma. Initially, the study investigates the symbiotic nexus between sustainable advancement and urban design principles. Subsequently, it scrutinizes the operational dynamics of the AMRUT initiative within the Jammu and Kashmir context. The tertiary objective evaluates the scheme's transformative impact on urban planning frameworks within the Anantnag Municipal purview. The quaternary aim analyzes the program's efficacy in actualizing Sustainable Development Goal 11 benchmarks within the specified region. The concluding objective assesses the pivotal function of local urban governance structures in orchestrating the scheme's implementation.

Methodologically, the study employs a tripartite approach. A descriptive research paradigm, predominantly utilizing secondary information repositories, addresses the primary and secondary objectives. An analytical research framework explains the third and fourth objectives, harvesting vital intelligence directly from survey participants, including the general populace and key stakeholders. Finally, an exploratory methodology serves the fifth objective, meticulously examining respondent perspectives complemented by pertinent secondary data sources.

This sophisticated investigative study enables a comprehensive dissection of the AMRUT scheme's effectiveness, illuminating its role in advancing sustainable urban development while addressing critical public service deficiencies within the specified administrative domain.

4.3 Research Variables

The present study aims to analyze correlation and interdependence between following research variables related to multiple domains of urbanization and sustainable town planning paradigms-

Table 4.1: Correlation between independent and dependent variables of urbanization and sustainable town planning

S. No	Independent Variables	Dependent Variables
1.	Urbanization	Health
2.	Town Planning	Sanitation
3.	Built Environment	Transportation
4.	AMRUT scheme	Drinking water supply
5.	Public parks	Education
6.	Green spaces	Sustainable Development

The interrelationship between urban development factors and quality-of-life metrics presents a complex causality worthy of rigorous investigation. This analysis explores six paired variables that influence contemporary urban ecosystems.

Urbanization's impact on health outcomes manifests through multifarious pathways. The concentration of populations in metropolitan centers creates both salutary and deleterious health consequences. While proximity to medical infrastructure enhances

accessibility, concomitant challenges emerge such as- ambient pollution, psychosocial stressors, and communicable disease proliferation. The epidemiological transition often accelerates as urbanization progresses, with non-communicable diseases supplanting infectious pathologies as predominant health concerns. Town planning's influence on sanitation represents a quintessential urban governance challenge. Meticulously designed municipal frameworks facilitate efficient waste management systems, wastewater treatment infrastructure, and sanitation access. The implementation of integrated sanitation hierarchies, from household facilities to municipal treatment plants, directly correlates with public hygiene outcomes and environmental quality preservation.

The built environment exerts profound influence on transportation modalities and efficacy. Architectural configurations, street network morphology, and land-use integration collectively determine mobility patterns. Transit-oriented development paradigms, pedestrian-centric design, and infrastructure connectivity catalyze sustainable transportation adoption while mitigating congestion externalities. India's Atal Mission for Rejuvenation and Urban Transformation (AMRUT) exemplifies targeted policy intervention affecting potable water provisioning. This scheme's implementation correlates with enhanced water infrastructure resilience, quality assurance mechanisms, and distribution equity. Hydraulic infrastructure development under AMRUT's aegis demonstrates the potency of policy instruments in addressing fundamental resource accessibility.

Public parks exhibit notable correlation with educational outcomes through unexpected mechanisms. These recreational spaces function as informal learning environments, cognitive restoration zones, and social integration facilitators. The proximity of educational institutions to verdant public spaces correlates with enhanced academic performance metrics and reduced educational disparities. Finally, green spaces demonstrate causal linkages with sustainable development trajectories. Urban sylvan areas function as carbon sequestration reservoirs, biodiversity sanctuaries, and thermal regulation mechanisms. The strategic integration of

naturalized spaces within urban matrices contributes to resilience against climatic perturbations while enhancing environmental carrying capacity.

This analysis illuminates the intricate interconnectedness between urban determinants and societal outcomes, underscoring the imperative for holistic policymaking that recognizes these complex relationships.

4.4 Type of Research Methodology

The study aims at applied research using 'Mixed Research Methodology' approach, including adoption of both qualitative and quantitative research methodology aspects as following-

I. Qualitative Aspects of Research Methodology for the Study

These qualitative aspects of this study include non-quantifiable data, involving exploration of public perspectives, opinions and satisfaction about availability and quality of various public services, as enunciated under the AMRUT mission, as well as analysis of implementation challenges and impact of AMRUT Mission on socio-economic development and town planning in Anantnag Municipal Council Area of Jammu and Kashmir. The qualitative aspects of the study also include vital research inputs and perspectives about town planning of Anantnag Municipal Council area, received from policy makers, town planners, officers & staff from Anantnag district administration and other stakeholders.

These vital qualitative data inputs were received using structured questionnaires and unstructured interview method, as data collection techniques. While questionnaires were used to collect the data from 250 general public respondents residing in 25 selected municipality wards of Anantnag Municipal Council, the unstructured interview method was used to collect research data from key stakeholders having direct relationship with town planning and development of the Anantnag Municipal Council region, such as Ward Councillors of different wards of Anantnag Municipal Council, officers from Anantnag Municipal Council, officers from Anantnag District Administration as well as members from Anantnag District Development Council.

II. Quantitative Aspects of Research Methodology for the Study

Quantitative aspects of this study include numerical data of the study such as the size of research sample, sampling methodology, physical and quantifiable data about various projects and town planning programs as implemented under AMRUT scheme in Anantnag Municipal Area, including number of lanes developed/ maintained, number of drains constructed/ repaired, number of parks developed/maintained, number of public toilets and other public utilities constructed/ developed/ repaired etc.

The quantitative data for the present research study are collected using probability sampling, non-probability/ purposive sampling, structured questionnaires, unstructured interview technique, data received through RTI applications, and secondary data sources including government reports, institutional publications, websites etc. These sampling and data collection techniques are elaborated in the subsequent sections of the study.

The study also examines prospects of sustainable development interventions as well as implementation challenges of AMRUT scheme in the region, and provide suggestions for revival of town planning practices in the area. Anantnag Municipal Council Area is selected for the purpose of present research study due to its predominant importance in context of trade and commerce, tourism and travel, and religious and cultural heritage.

4.5 Sampling Methodology

1. Sample Population, Sample Size and Sample Type for the Study

In compliance to the suggestions received in previous evaluations, the Anantnag Municipal Council has been selected as universe for the present study, with sample population selected from the 25 municipality wards of Anantnag Municipal Council in Jammu and Kashmir Union Territory, using technique of Simple Random Sampling. As recommended in previous evaluations, the research sample size for the present study has been kept 300. To develop holistic analytical view of town planning and impact of AMRUT scheme in Anantnag Municipal Council area, the research sample for the present study is diversified and comprise of multiple stakeholders, that

include members from general public residing in the respective municipality wards of the Anantnag Municipal Council, the ward councilors of the respective municipality wards, officers from the Anantnag Municipal Council, officers from Anantnag District Administration as well as members from the Anantnag District Development Council. The detailed description of these respondents along with type of research sample for present research study, is presented in table 4.2 below-

Table 4.2: Details of the Research Respondents and Type of Research Sample for the Study

S. No	Description of Research Respondents/ Type of Research Sample	Number of Research Respondents
1.	Community Members/ General Public (10 members from each ward out of 25 selected municipality wards)	10 x 25 = 250
2.	Municipality Ward Councilors (01 Councilor per ward out of 25 selected municipality wards)	01 x 25 = 25
3.	Officers from Anantnag Municipal Council (Chairperson/Vice Chairperson & other staff)	10
4.	Officers from Anantnag District Administration (Deputy Commissioner/Additional District Development Commissioner/ District Town Planner etc.)	10
5.	Members from Anantnag District Development Council	05
TOTAL SAMPLE SIZE		**300**

2. Sampling Techniques for the Study

Anantnag Municipal Council of Jammu & Kashmir is the universe for the present research study. The study aimed to use both probability and non-probability sampling methods to finalize the research sample for data collection.

I. Probability Sampling Technique used in the Study

The study uses a simple random sampling technique (Probability Sampling) to finalize the research sample from general public residing in 25 Municipality wards of Anantnag Municipality Council of Jammu & Kashmir. In this sampling approach, each population element is given an equal probability and chance for getting enlisted in final research sample used for the present study. Using probability sampling/ simple random sampling approach, the research sample from general public residing in below mentioned twenty-five municipality wards of the Anantnag Municipal Council, were selected for the research purpose and data collection, with 250 citizens/ residents being selected for data collection for the present study (ten citizens/ residents selected from each of these municipality wards).

Table 4.3: List of Municipality Wards in Anantnag Municipal Council selected for the Study

S.No.	Municipality Ward	S.No.	Municipality Ward	S.No.	Municipality Ward
1.	Bangidar	**10.**	Anchidora-A	**19.**	Qazi Mohalla
2.	Khanabal-A	**11.**	Anchidora-B	**20.**	Khah Bazar
3.	Khanabal-B	**12.**	Kadipora	**21.**	Khawja Mir Ali
4.	Khanabal-C	**13.**	Sarnal Bala	**22.**	Hazratbal

5.	Nai Basti-A	**14.**	Pehroo-A	**23.**	Shirpora Bala
6.	Nai Basti-C	**15.**	Pehroo-B	**24.**	Ashajipora-A
7.	Lal Chowk	**16.**	Sarnal Payeen-A	**25.**	Ashajipora-B
8.	Dangar Pora	**17.**	Sarnal Payeen-B		
9.	S. K. Colony	**18.**	Kralteng		

II. Non-Probability Sampling Technique used in the Study

The study also uses a non-probability/ purposive sampling method, while selectin research sample from the research respondents/ stakeholders having direct relationship and dealing with development and town planning of Anantnag Municipal Council region. This technique of research sampling has been adopted for finalization of research sample for the study that comprise twenty-five ward councilors from the selected twenty-five municipality wards of the Anantnag Municipal Council, ten officers and staff from Anantnag Municipal Council, ten officers from the Anantnag District Administration and five members from the Anantnag District Development Council (DDC) actively facilitating implementation of welfare programmes and development projects in the district.

4.6 Data Collection Techniques/Tools

Both primary and secondary data sources are utilized to collect research data for the present research study. Structured questionnaires with both open-ended and closed-ended questions, have been adopted to receive primary data for the present study. Also, for the collection of primary data for the present study and to receive wider perspectives from several key stakeholders about the implementation challenges for the projects taken up under AMRUT scheme as well as emergent town planning

concerns and challenges in the Anantnag Municipal Council Area, personnel interview method i.e. unstructured interview technique is used.

I. Questionnaire Method used for the Study

For the purpose of present research study, the research data were received from respondents, including two hundred fifty community members/ general public from the selected twenty-five municipality wards of the Anantnag Municipal Council, through structured questionnaires, having both open-ended and closed-ended questions.

II. Interview Method used for the Study

Unstructured interview technique has been adopted to illicit comprehensive, detailed and valuable information for the present research study from several key stakeholders, that included twenty-five ward councilors of the selected twenty-five municipality wards of Anantnag Municipal Council, ten officers and staff from the Anantnag Municipality Council, ten officers from the Anantnag District Administration and five members from the Anantnag District Development Council (DDC) involved in the public welfare and citizen empowerment initiatives in the region.

III. Data Collection from Other Data Sources

For the present research study, also a significant amount of data have been collected from other data sources that included data received through Right to Information Act (RTI) applications, government reports, and secondary data from published research articles, review papers, published books, institutional reports from global development agencies like United Nations, World Bank, World Health Organization, UNDP etc. as well as data from government websites and web portals, archives, and newspapers.

Table 4.4: Techniques of Primary Data Collection used for the Study

S. No	Description/ Type of Research Respondents	Number of Research Respondents	Data Collection Method/ Technique Adopted
1.	Community Members/ General Public (10 members from each of the twenty-five selected Municipality Wards)	10x25=250	Structured Questionnaire Method (Having both closed-ended and open-ended questions)
2.	Municipality Ward Councilors (01 Ward Councilor from each of the twenty-five selected Municipality Wards)	01x25=25	Un-structured Interview Technique
3.	Officers & Staff from Anantnag Municipal Council (Chairperson, Vice Chairperson & other staff)	10	Un-structured Interview Technique
4.	Officers from Anantnag District Administration (Deputy	10	Un-structured Interview Technique

	Commissioner/Additional District Development Commissioner/ District Town Planner etc.)		
5.	Members from Anantnag District Development Council (DDC)	05	Un-structured Interview Technique
TOTAL		**300**	

4.7 Data Analysis Methods/Tools

To ensure comprehensive analysis of the acquired primary and secondary data, and to reveal meaningful statistical inferences in terms of the results and findings of the present research study, various data analysis methods and tools are used, such as tabulation, charts, graphs, bar diagrams and other statistical analysis tools as per data specifications and requirements.

Table 4.5: Research Methodology used for achievement of the Research Objective-I

Research Objective-I	Sample Size/ Data Sources	Sample Type	Instrument/ Tool/ Data Collection Technique	Level
To understand the interlinkage between sustainable	Analysis & interpretation of secondary data sources	Secondary data sources including published government reports, reports from national	Analysis & Interpretation of the secondary	District Level/ UT Level/ National Level/ International

development and town planning		and international institutions, websites & archives, published research journals, books and newspapers	data sources	Level

For achievement of this research objective-I, various types of secondary data sources have been comprehensively reviewed and valuable insights retrieved regarding the close-knit relationship and association between sustainable development and town planning paradigms. These data sources include published research articles, review papers, books, reports from various regional and global institutions working for effective implementation of sustainable development and town planning mechanisms, government websites and archives such as websites of regional housing and urban planning department of Jammu & Kashmir, Jammu & Kashmir Economic Reconstruction Agency (JK-ERA), website of Anantnag Municipal Council and Anantnag District Administration, websites of several central ministries, web portals of the United Nations, World Bank, newspapers etc.

The received data obtained from approximately 100 published research paper, 03 government reports, 05 reports from national and international institutions, among others, have been comprehensively reviewed and analyzed, to interpret the meaningful insights about sustainable development, its importance in urban development and its interlinkage with town planning process.

Table 4.6: Research Methodology used for achievement of Research Objective-II

Research Objective-II	Sample Size/ Data Sources	Sample Type	Instrument/ Tool/ Data Collection Technique	Level
To examine the working of AMRUT scheme in Jammu and Kashmir	Analysis & interpretation of data received through RTI Applications and data received from secondary data sources	Data received from Government of Jammu & Kashmir through RTI applications, and secondary data sources, including published research journals, books, government reports, reports from national and international institutions, websites & archives as well as data from and newspapers	Analysis & Interpretation of the data received through RTI applications and from secondary data sources	District Level/ UT Level/ National Level/ International Level

For achievement of this research objective, various types of secondary data sources have been comprehensively reviewed and valuable insights retrieved regarding working of AMRUT scheme in Jammu & Kashmir region, including implementation status of the scheme, its coverage in terms cities and towns, details of various projects enunciated under the scheme, physical and financial progress of these projects, impact of these projects on town planning and urban development in Jammu and Kashmir, especially in terms of public service delivery and improvement in urban life quality.

These data sources include published research articles, review papers, books, government reports, reports from various regional and global institutions working for effective implementation of sustainable development and town planning mechanisms, government websites and archives such as websites of regional housing and urban planning department of Jammu & Kashmir, Jammu & Kashmir Economic Reconstruction Agency (JK-ERA), websites of several central ministries, web portals of the United Nations, World Bank, newspapers etc. For the present research objective, a significant amount of data have also been collected from the concerned departments of Civil Secretariat of Jammu & Kashmir and other allied development agencies, using Right to Information Act (RTI) applications.

The received data obtained from approximately 100 published research papers and books, 03 reports from Government of Jammu & Kashmir and central government, 05 reports from national and international institutions, along with significant amount of data received from multiple government departments of Jammu & Kashmir through RTI applications, have been comprehensively reviewed and analyzed, to receive valuable insights about working of AMRUT scheme in Jammu & Kashmir, its current status and impact on town planning and urban development in the region.

Table 4.7: Research Methodology used for achievement of Research Objective-III

Research Objective-III	Sample Type	Sample Size (Number of Participants)	Instrument/ Tool/ Sample Design/ Data Collection Technique	Level
To assess the impact of AMRUT scheme on town planning in Anantnag Municipal Council Area	Community Members/ General Public (10 members from each of the twenty-five elected Municipality Wards)	10x25=250	Structured Questionnaire Method (Having both closed-ended and open-ended questions)	District Level

	Municipality Ward Councilors (01 Ward Councilor from each of the twenty-five selected Municipality Wards)	01x25=25	Un-structured Interview Technique	
	Officers & Staff from Anantnag Municipal Council (Chairperson, Vice Chairperson, Secretary & other staff)	10	Un-structured Interview Technique	
	Officers from Anantnag District Administration	10	Un-structured Interview Technique	

	(Deputy Commissioner/ Additional District Development Commissioner/ District Town Planner etc.)			
	Members from Anantnag District Development Council (DDC)	05	Un-structured Interview Technique	
TOTAL		**300**		

Anantnag Municipal Council of Jammu & Kashmir has been selected as universe for the present study, including the present research objective, with sample population selected from the 25 municipality wards of Anantnag Municipal Council, using Simple Random Sampling Technique. To receive holistic perspectives about town planning and impact of AMRUT scheme in Anantnag Municipal Council area, the research sample is diversified and comprise of multiple stakeholders, that include members from general public residing in the respective municipality wards of the Anantnag Municipal Council, the ward councilors of the respective municipality wards, officers and staff from the Anantnag Municipal Council, Officers and officials from Anantnag District Administration, and members from the Anantnag District Development Council, using both probability and non-probability sampling techniques.

Using probability sampling approach, the research sample from general public from these selected municipality wards of Anantnag Municipal Council, were finalized selecting 250 citizens/ residents for data collection for the present research objective, with ten citizens/ residents selected from each of these municipality wards.

Non-probability/ purposive sampling method is used to select the research sample from stakeholders having direct relationship with town planning of Anantnag Municipal Council region, and subsequently diverse research sample has been finalized that comprise twenty-five ward councilors from the selected twenty-five municipality wards of the Anantnag Municipal Council, ten officers and staff from Anantnag Municipal Council, ten officers and officials from the Anantnag District Administration, and five members from the Anantnag District Development Council (DDC).

In context of the present research objective, the research data were received from two hundred fifty community members/ general public from the selected twenty-five municipality wards of the Anantnag Municipal Council, through structured questionnaires, having both closed-ended and open-ended questions. Unstructured interview technique has been adopted to illicit comprehensive information from several key stakeholders, that included twenty five Ward Councillors from the twenty-five selected municipality wards of Anantnag Municipal Council, ten officers and staff from the Anantnag Municipality Council, ten officers and officials from the Anantnag District Administration, and five members from the Anantnag District Development Council (DDC) involved in the public welfare and citizen empowerment initiatives. To obtain vital results and findings of the present research objective, significant amount of research data have been received through Right to Information Act (RTI) applications as well as from secondary data sources such as published research articles, review papers, books, institutional reports, government websites, archives, newspapers etc.

For comprehensive evaluation of the acquired data, and to achieve meaningful results and findings for the present research objective, various data analysis tools and techniques are used, such as tabulation, charts, graphs, bar diagrams etc.

In line with requirements of the present research objective, data collection focused to receive vital information about implementation of AMRUT scheme in Anantnag Municipal Council Area of Jammu & Kashmir, its present status and progress, its impact on development of vital urban infrastructure in the region and facilitation of optimum delivery of basic public services, such as drinking water services, sanitation and waste management, drainage services, septage management, public transportation, public parks, open spaces and green spaces, and other facilities as enunciated under the AMRUT mission guidelines. The data collection and subsequent data analysis in context of the present research objective, also focusses on highlighting concerns of town planning and implementation challenges of town planning initiatives such as AMRUT being faced in Anantnag Municipal Council Area.

Accordingly, the above developmental issues were discussed with respondents, using structured questionnaire technique and unstructured interview method. Public satisfaction about progress and impact of AMRUT mission in terms of development of resilient urban physical infrastructure as well as facilitating accessible as well as quality public services in Anantnag Municipal Council Area, was analyzed using a 1-5 Likert Scale, and adopting the following coding formula-

Codes used

1. GP= General Public
2. WC= Ward Councillors
3. OS-AMC=Officers and Staff from Anantnag Municipal Council
4. OS-ADA= Officers and Staff from Anantnag District Administration
5. MM-ADDC= Members from Anantnag District Development Council

Table 4.8: Research Methodology used for achievement of Research Objective-IV

Research Objective-IV	Sample Type	Sample Size (Number of Participants)	Instrument/ Tool/ Sample Design/ Data Collection Technique	Level
To analyze the efficacy of AMRUT scheme in dealing with the challenge of realizing the SDG-11 in Anantnag Municipal Council Area	Community Members/ General Public (10 members from each of the twenty-five elected Municipality Wards)	10x25=250	Structured Questionnaire Method (Having both closed-ended and open-ended questions)	District Level
	Municipality Ward Councilors (01 Ward Councilor from each of the	01x25=25	Un-structured Interview Technique	

	twenty-five selected Municipality Wards)			
	Officers & Staff from Anantnag Municipal Council (Chairperson, Vice Chairperson, Secretary & other staff)	10	Un-structured Interview Technique	
	Officers from Anantnag District Administration (Deputy Commissioner/ Additional District Development Commissioner/ District Town Planner etc.)	10	Un-structured Interview Technique	

	Members from Anantnag District Development Council (DDC)	05	Un-structured Interview Technique	
TOTAL		**300**		

To receive holistic perspectives about sustainable town planning initiatives in Anantnag Municipal Council Area, including impact of AMRUT scheme in realizing targets as incorporated under the United Nations' Eleventh Sustainable Development Goal- Sustainable Cities and Communities (SDG-11) in Anantnag Municipal Council region, the research sample is diversified and comprise of multiple stakeholders, that include members from general public residing in the twenty five municipality wards of the Anantnag Municipal Council, the ward councilors of the respective municipality wards, officers and staff from the Anantnag Municipal Council, Officers and officials from Anantnag District Administration, and members from the Anantnag District Development Council (DDC).

In context of the present research objective, both probability and non-probability sampling techniques are used to finalize the research sample for collection of vital research data. Simple random sampling technique (Probability Sampling) has been used to finalize the research sample from general public residing in the selected twenty-five municipality wards of Anantnag Municipal Council. Non-probability/ purposive sampling method is used to select the research sample from stakeholders having direct relationship with town planning of Anantnag Municipal Council region, and subsequently diverse research sample has been finalized that comprise twenty-five ward councilors from the selected twenty-five municipality wards of the Anantnag Municipal Council, ten officers and staff from Anantnag Municipal Council, ten officers and officials from the Anantnag District Administration, and five members from the Anantnag District Development Council (DDC).

Both primary and secondary data sources are utilized to collect research data for the present research objective. Structured questionnaires with both closed-ended and open-ended questions, have been adopted to receive primary data. Also, to receive wider perspectives from several key stakeholders, about the impact of AMRUT scheme on implementation of sustainable development paradigms and realization of SDG-11 targets in the Anantnag Municipal Council Area, personnel interview method i.e. unstructured interview technique is used.

To ensure comprehensive analysis of the acquired primary and secondary data, and to obtain results and findings for the present research objective of the present study, various data analysis methods and tools are used, such as tabulation, charts, graphs, bar diagrams and other statistical analysis tools. In line with requirements of the present research objective, data collection emphasized to receive vital information about efficacy and effectiveness of AMRUT scheme in implementation of sustainable development initiatives in Anantnag Municipal Council Area of Jammu & Kashmir, as envisaged under United Nations' 11th Sustainable Development Goal (SDG-11) targets, and evaluate the public satisfaction about these interventions.

Accordingly, these issues got discussed with respondents in detail, using structured questionnaire method and unstructured interview technique. Public satisfaction was analyzed using a 1-5 Likert Scale, and using the coding formula as adopted for the previous objective.

Table 4.9: Research Methodology used for achievement of Research Objective-V

Research Objective-V	Sample Type	Sample Size (Number of Participants)	Instrument/ Tool/ Sample Design/ Data Collection Technique	Level

To evaluate the role of local urban government in implementation of AMRUT Scheme	Municipality Ward Councilors (01 Ward Councilor from each of the twenty-five selected Municipality Wards)	01x25=25	Un-structured Interview Technique	District Level/ UT Level/ National Level/ International Level
	Officers & Staff from Anantnag Municipal Council (Chairperson, Vice Chairperson, Secretary & other staff)	10	Un-structured Interview Technique	

	Officers from Anantnag District Administration (Deputy Commissioner/ Additional District Development Commissioner/ District Town Planner etc.)	10	Un-structured Interview Technique	
	Members from Anantnag District Development Council (DDC)	05	Un-structured Interview Technique	
TOTAL		**50**		

In compliance to recommendations in previous evaluations, the sample size for the present research objective has also been kept 50. To receive detailed and comprehensive perspectives about role, responsibilities and effectiveness of urban local bodies (ULBs), including municipalities and town area committees, in facilitation of socio-economic progress and sustainable town planning as well as

effective implementation of national urban planning schemes such as AMRUT, the research sample is diversified and comprise of multiple stakeholders, that include twenty five ward councilors of the respective twenty five municipality wards of the Anantnag Municipal Council, ten officers and staff from the Anantnag Municipal Council, ten officers and officials from Anantnag District Administration, and five members from the Anantnag District Development Council (DDC) who are directly involved in development of the district as whole as well as implementation of regional and national urban planning schemes in municipalities and other urban areas of the district.

For the present research objective, non-probability/ purposive sampling method is used to select the research sample from stakeholders having direct relationship with town planning of Anantnag Municipal Council region, and subsequently diverse research sample has been finalized that comprise twenty five ward councilors from the selected twenty five municipality wards of the Anantnag Municipal Council, ten officers and staff from Anantnag Municipal Council, ten officers from the Anantnag District Administration, and five members from the Anantnag District Development Council (DDC).

Both primary and secondary data sources are utilized to collect research data for the present research objective. To receive wider perspectives about the role, responsibilities, effectiveness and challenges of local urban government (ULBs), including municipalities and town area committees, via a vis urban development and town planning, especially in context of their role in implementation of AMRUT scheme in Anantnag Municipal Council Area of Jammu & Kashmir region, data were received from several key stakeholders as mentioned above, using personnel interview method i.e. unstructured interview technique.

Unstructured interview technique has been adopted to illicit comprehensive information from several key stakeholders, that included twenty five municipality ward councilors from the selected twenty five municipality wards of Anantnag Municipal Council, ten officers and staff from the Anantnag Municipality Council, ten officers and staff from the Anantnag District Administration, and five members from the Anantnag District Development Council (DDC) working in the Anantnag

Municipal Council Area and involved in the public welfare and citizen empowerment initiatives. To obtain vital results and findings of the present research objective, secondary data have also been collected from published research articles, review papers, books, institutional reports, government websites and archives, newspapers as well as using Right to Information Act (RTI) applications. For comprehensive evaluation of the acquired data, and to achieve meaningful results and findings for the present research objective, various data analysis tools and techniques are used, such as tabulation, charts, graphs, bar diagrams etc.

In line with the research objective, data collection focused to receive vital information about the role of local urban government (ULBs), including municipalities and town area committees, in town planning and implementation of regional as well as national town planning projects such as AMRUT scheme, their authority and responsibilities, and their effectiveness in promoting urban transformation, with special reference to the role of local urban government/ ULBs in town planning and implementation of AMRUT scheme in Anantnag Municipal Council Area of Jammu & Kashmir.

Accordingly, these town planning and development issues, got discussed with selected research respondents, using unstructured interview method. Varied perspectives and valuable insights were received from the selected research respondents about role, authority, responsibility and functioning of these ULBs vis a vis town planning, as well as their satisfaction about effectiveness of local urban government (ULBs), including Anantnag Municipal Council, about augmentation of town planning paradigms and implementation of urban planning schemes such as AMRUT mission in Anantnag Municipal Council Area of Jammu & Kashmir. Satisfaction of these research respondents about effectiveness of local urban government, especially in Anantnag Municipal Council, was evaluated adopting a 1-5 Likert Scale, and using the following coding formula-

WC= Ward Councillors
OS-AMC=Officers and Staff from Anantnag Municipal Council
OS-ADA= Officers and Staff from Anantnag District Administration
MM-ADDC= Members from Anantnag District Development Council

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CHAPTER-5
DATA ANALYSIS AND INTERPRETATION

Contents in the Present Chapter

5.1 Brief Introduction

This chapter establishes an analytical framework for examining the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) scheme's implementation dynamics within Jammu and Kashmir's urban landscape. The investigation encompasses multidimensional assessment of this flagship national urban development initiative, particularly its manifestation in the Anantnag Municipal Council Area. The research architecture in present chapter integrates several interconnected objectives to provide holistic description and analytical perspectives of five major research objectives of the present study. Primarily, it investigates the symbiotic relationship between sustainable development paradigms and town planning methodologies. Through rigorous methodological approaches, the study extrapolates empirical evidence illustrating this critical nexus. The analytical scope extends to three additional research dimensions: evaluation of AMRUT's operational framework within Jammu & Kashmir's distinctive socio-political context; assessment of the scheme's socioeconomic impact trajectories in Anantnag Municipal Council; and critical examination of AMRUT's efficacy in actualizing Sustainable Development Goal-11 targets within the defined geographical parameters.

The analytical discourse contextualizes Urban Local Bodies (ULBs) as instrumental governance mechanisms in facilitating optimal urban development and sustainable planning initiatives. Post-liberalization political devolution and administrative decentralization in India- crystallized through the 74th Constitutional Amendment Act of 1992, have elevated these institutions as pivotal loci of urban governance transformation. Endowed with political authority, administrative autonomy, and fiscal decentralization, these governance entities function as implementation catalysts for socioeconomic welfare programs and urban planning initiatives, including AMRUT and the Smart City Mission. The chapter delineates a comprehensive analytical perspective regarding the institutional capacity, jurisdictional authority, and implementation effectiveness of ULBs within the urban development landscape, with particular emphasis placed on examining the functional autonomy of these institutions in operationalizing national urban planning schemes across Jammu & Kashmir's

distinctive territorial context. The analytical framework employs methodological pluralism to evaluate the functional dynamics of these institutions in facilitating vibrant urban development initiatives.

Of particular significance is the chapter's emphasis on elucidating the methodological approach employed to examine ULBs' role in AMRUT implementation within Anantnag Municipal Council. The analytical framework incorporates qualitative and quantitative assessment parameters to evaluate institutional performance metrics and implementation outcomes. Research findings illuminate critical insights regarding the convergence between institutional capability and implementation effectiveness in achieving sustainable urban transformation. Through this multidimensional analytical approach, the chapter establishes a comprehensive understanding of AMRUT's implementation architecture, institutional dynamics, and transformation potential within Jammu & Kashmir's urban ecosystem. The integrative framework synthesizes empirical evidence to evaluate how these urban governance mechanisms translate policy vision into implementation reality, particularly within regions characterized by distinctive socio-political landscapes. The analytical discourse contributes valuable perspectives regarding the interplay between national development policies, regional implementation mechanisms, and localized impact trajectories in urban transformation initiatives.

5.2 Interlinkage between Sustainable Development and Town Planning (Research Objective-I)

This objective aims to explain the interlinkage and correlation between sustainable development and town planning, and emergent need for incorporation of sustainable and innovative mechanisms in town planning processes. To achieve desired outcomes for this research objective, an extensive analysis of diverse secondary sources was conducted to elucidate the intricate nexus between sustainable development and town planning frameworks. The analytical review encompassed scholarly publications, peer-reviewed articles, academic treatises, and comprehensive reports from specialized institutions dedicated to advancing sustainable development and urban planning methodologies.

Documentary evidence was meticulously gathered from governmental repositories, including the Regional Housing and Urban Development Authority of Jammu & Kashmir, the Jammu & Kashmir Economic Reconstruction Agency (JK-ERA), and official portals of the Anantnag Municipal Council and Anantnag District Administration. Additional authoritative sources consulted included central ministerial databases, United Nations documentation, World Bank analytical reports, and journalistic accounts. This multifaceted approach to data acquisition facilitated the extraction of nuanced insights regarding the symbiotic relationship between sustainability paradigms and urban planning mechanisms, thereby establishing a robust empirical foundation for subsequent analytical deliberations. The methodological rigor applied to source selection ensured the comprehensiveness and validity of the findings concerning the interdependence of sustainable development principles and town planning practices in the specified geopolitical context.

5.2.1 Data Analysis and Interpretation

The received data obtained from approximately 100 published research paper, 03 government reports, 05 reports from national and international institutions, among others, have been comprehensively reviewed and analyzed, to interpret the meaningful insights about sustainable development, its importance in urban development and its interlinkage with town planning process. Results of the comprehensive analysis of these data sources, in context of the present research objective, are presented as under-

5.2.2 Results and Findings

The results and findings in context of the present objective-I of the study i.e. to analyze interlinkage between sustainable development and town planning, reveal an intricate and close-knit association between these two development paradigms, and strongly advocate for understanding of these vital concepts in unison as well as incorporation of emerging sustainable development mechanisms and innovative/ smart solutions into town planning processes, to ensure inclusive, eco-friendly, resilient and sustainable socio-economic development for all present generations as well as future progenies.

The comprehensive analysis of the received data suggest that sustainability has garnered prioritized attention of policy makers and global scientific community, during

the present era of global crisis, where countries are re-orienting their development policies to mitigate emerging concerns of global warming, unprecedented rise in temperatures, frequent climate changes, melting of glaciers, occurrence of flash floods, snow storms, cyclones etc. As such, sustainable development frameworks and allied SDGs have taken central stage in moder town planning paradigms.

6th Assessment report titled 'Climate Change 2021: The physical Science basis', published by United Nations' Intergovernmental Panel on Climate Change (IPCC), has given holistic overview of adverse effects of climate change, its immediate and long-term implications on human lives, as also mechanisms of mitigation (https://www.ipcc.ch)[1]. The main findings of this important global report, in context of urgency for implementation of sustainability paradigms in town planning process, are presented as below-

1. Expected rise in average global temperature by middle of twenty first century i.e. 2050 AD, has been calculated as minimum two degree Celsius.
2. Human induced environment changes have led to presence of highest levels of CO2 in the Earth's atmosphere.
3. Rise in sea levels and ocean levels have increased three-fold in past few decades only, thereby threatening life on coastal regions across the world.
4. World will witness severe heat waves, lesser precipitation, droughts and decrease in carbon footprint, with slightest increase in global temperatures, as low as 0.5 degree Celsius.
5. Geomorphology and topology of mountains and snowy glaciers will change due to rise in temperatures, which will disturb ecological balance, rain patterns, water cycles and flora and fauna of these natural habitations.

These vital research inputs have facilitated critical policy discussions among global leaders about persistent risks and emerging ecological challenges, thereby urgency for

[1] https://unfccc.int/documents/636550?gad_source=1&gclid=CjwKCAiAjp-7BhBZEiwAmh9rBbxhiNl5vNfYafWLQNge5B61qsqFTiWkK8V1INeioX9GDfUA6miJkBoC4B8QAvD_BwE

effective implementation of sustainability and ecofriendly mechanisms in town planning, particularly, with respect to India, the country having most vulnerable population and deficient economic resources to cope up with any natural adversaries.

Jelmer van der Ham (2022), has extensively evaluated correlation between sustainability and town planning, and especially highlighting the effect of population density on sustainable development initiatives while framing town planning policies. The study argued that population densification is significantly impacting resource efficiency, accessibility and sustainability in urban human settlements, as well as multilateral and linear town modelling in context of SDG-11 paradigms.

Adeeb A. Kutty, Murat Kucukvar, Galal M. Abdella et. al. (2022), in their research study, attempt at modelling sustainability and resilience into urban planning to enable cities and towns cope up with unfathomable urban challenges and to provide them a futuristic orientation through feedback looping and dynamic interaction mechanism.

Lidia Mierzejewska (2016), while referring to development of Polish urban settlements and briefly explaining Haughton's four city models- self-reliant city, redesigned city, externally dependent city and fair-share city, analyses need for development of holistic town planning models with inclusion of sustainability and resilience factors in both structural and functional aspects of town planning,

Likewise, several other research studies and publications, as comprehensively discussed under 'literature review' in the chapter-2 of this study, provide varied dimensions of correlation and interdependence of sustainable development and town planning concepts, and need for incorporation of ecofriendly and sustainability reforms in urban development process, more so due to recent unprecedented climate changes that affected quality of urban life across the countries.

Jammu & Kashmir region also due to distinct topography and unique climate, has been witnessing unprecedented climate changes, and subsequently concerns of sustainability in urban planning process. This ecologically fragile world-famous tourism destination, in recent times, also witnessed adverse climate changes and abnormal weather patterns, such as increase in temperatures, cloud bursts, frequent floods, lesser precipitation and catastrophic deluge in 2014 AD, which inundated most parts of Anantnag district and

low-lying areas of Srinagar capital city, resulting in immense human and financial losses.

5.3 Working of AMRUT Scheme in Jammu & Kashmir (Research Objective-II)

Jammu & Kashmir government has been implementing several urban development and town planning reforms, including both regionally formulated and implemented schemes as well as implementation of national urban planning projects The regional schemes conceived and implemented by regional administration of Jammu and Kashmir include- 'Capital City Development Programme- CCDP', 'Integrated Development of Medium Towns- IDMT', Solid Waste Management- SWM', 'Development of Bus Addas' etc. (www.jkhudd.gov.in). While as the national urban flagship programs implemented in the J&K region include 'Smart City Mission' and 'AMRUT Mission'.

Under AMRUT mission, apart from two capital cities of Srinagar and Jammu, three more towns, including Anantnag Municipal Council as well as the towns of Kargil and Leh (Presently under Ladakh UT administration post J&K Reorganization Act-2019), have also been included (www.amrut.gov.in). The regional administrations of Union Territories of Jammu and Kashmir as well as that of Ladakh, have been vigorously involved in facilitation of paced development of physical infrastructure, promoting vital urban services in these selected regions, by implementing AMRUT scheme. Government of Jammu and Kashmir has hired services of a private firm 'Shah Technical Consultants Private Ltd' as Project Development and Management Consultancy- PDMC for effective implementation of AMRUT 2.0 scheme in the J&K region (www.stc.co.in).

In this context, the second research objective of the present study aims to examine working of this vital national urban planning scheme i.e. AMRUT in Jammu & Kashmir region, and evaluating its progress, scope and challenges in transforming the urban paradigms in the region.

To accomplish this investigative analysis, an exhaustive examination of multifarious secondary information repositories was meticulously conducted, yielding substantive

discernments regarding the AMRUT scheme's operational dynamics within the Jammu & Kashmir territory. The comprehensive analysis encompassed the scheme's implementation trajectory, geographical purview across urban settlements, elucidation of constituent initiatives, quantifiable physical and fiscal advancement metrics, and the consequential ramifications on metropolitan planning and civic development, particularly vis-à-vis public service provision and enhancement of urban life quality.

The vital information was derived from scholarly publications, critical assessments, academic volumes, governmental reports, and expositions from regional and global entities dedicated to promoting sustainable development frameworks and urban planning mechanisms. Digital repositories consulted included the official electronic platforms of the regional Housing and Urban Planning Department, the Jammu & Kashmir Economic Reconstruction Agency, numerous central ministerial portals, United Nations digital archives, World Bank information hubs, and journalistic sources.

Additionally, considerable empirical evidence was procured directly from relevant administrative divisions within the Civil Secretariat of Jammu & Kashmir and affiliated developmental institutions through formal applications under the auspices of the Right to Information Act, thereby enriching the analytical foundation with authoritative and contemporaneous data.

This methodological approach facilitated a nuanced comprehension of the multidimensional impacts by the AMRUT scheme's implementation, particularly regarding infrastructural enhancements, resource allocation efficacy, and consequential improvements in citizenry's quality of life within the urbanized regions of this distinctive northwestern Indian territory.

5.3.1 Data Analysis and Interpretation

The empirical statistical data and valuable insights, aggregated from approximately 100 scholarly publications and monographs, supplemented by triplicate governmental reports from the Jammu & Kashmir administration and central government authorities, quintet reports from domestic and transnational organizations, alongside voluminous documentation procured through Right to Information requisitions from sundry J&K

governmental entities, has undergone meticulous scrutiny and analytical interpretation. This comprehensive evaluation endeavoured to extract substantive insights regarding the operational mechanics, contemporary status, and developmental ramifications of the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) scheme within the Jammu & Kashmir territorial context, with particular emphasis on its influence upon urban planning paradigms and metropolitan evolution. The subsequent exposition delineates the consequential revelations and inferential determinations derived from this exhaustive analytical undertaking, contextualized specifically within the parameters of the extant research objectives, are as presented in following section-

5.3.2 Results and Findings

The collected data have been meticulously analyzed to receive the holistic perspectives about working of AMRUT scheme in Jammu & Kashmir, its role and impact on town planning and urban development across the union territory, its coverage, current status and progress, as well as physical and financial efficiency of various projects taken up under AMRUT scheme in selected cities and towns of Jammu and Kashmir. As mentioned above, for achievement of the present research objective, data have been received from various secondary data sources such as published research papers and books, reports from regional administration of J&K administration and central government, reports from international organizations etc; as well as data received through use of RTI applications. As such, the results and findings of the present research objective, are accordingly presented under following two broad sub headings-

1. Results and Findings from Analysis of Secondary Data Sources

Comprehensive analysis of multiple secondary data resources, as reflected above, reveals that the region of Jammu & Kashmir because of its unique topography, geographical location, particular climate, hilly terrain, immense seismic vulnerability and volatile political environment, is facing significant administrative and development challenges, that affects socio-economic development of the union territory as well as implementation of development initiatives, including implementation of urban development and town planning schemes such as AMRUT Mission.

However, the regional administration is navigating the trajectories of urban planning and development across J&K through implementation of AMRUT scheme, under which till now, both capital cities of Srinagar and Jammu have been included along with towns of Anantnag Municipality Council, Kargil town and Leh town (Kargil town and Leh town are presently governed by administration of UT of Ladakh). As provided under the mission guidelines of the AMRUT scheme, various development projects have been implemented in these selected cities and towns, to improve drinking water services, drainage and sewerage facilities, waste management, septage, public transportation, development of public parks and green spaces, creation of children play areas and recreational facilities etc.

Several researchers have attempted to provide vital insights into these developments in the union territory of Jammu and Kashmir, and highlighted the role, functioning and impact of AMRUT scheme in context of transformation of urban landscape in the region.

Khan M; R. Reshi et al. (2023) analyzed development of urban slums across the multiple districts of Jammu and Kashmir, with evaluation of access to basic civic services such as water supply and sanitation. The study suggests that unplanned urbanization and alarmed growth of urban slums, has led to inadequate water and sanitation services in cities and towns of the UT of Jammu & Kashmir. The study advocates for reforms in urban planning policies and development paradigms to provide optimum basic services to slum dwellers.

Shivam Singh et al. (2021) examines status and impact of Government of India's flagship urban development programme- AMRUT by analysing its working in Jammu & Kashmir and its role in facilitation of socio-economic development, urban planning and citizen empowerment in the region. The study reveals that the AMRUT scheme aims to transform the urban landscape by developing resilient urban infrastructure and facilitating effective urban services etc. However, this vital national urban planning initiative has shown little impact in Jammu and Kashmir till now, due to multiple development constraints.

Chowdhary S. (2018) provides detailed insights about nature, pattern, pace and challenges of the urbanization in Jammu & Kashmir. It suggests that urbanization in the UT of J&K, is alarmingly increasing, in a haphazard and unplanned manner, without policy focus towards conservation of fragile urban environment and sustainable development, which has led to immense urban development challenges in major cities and towns of the region.

Khan K. A. & Mondal N. A. (2018) trace the population growth, urbanization pattern and development of small, medium and large towns and cities of Jammu & Kashmir, during the period 1961-2011. The study suggests paced urbanization of small and medium towns during the period, with inadequate provisions of basic amenities in these towns as compared to large cities. The study emphasizes development of small and medium towns to facilitate sustainable and equitable development.

Rajesh Venugopal and Sameer Yasir (2017) analyzed political narratives, social construction understanding and impact of 2014 devastating floods in J&K particularly in urban areas that affected two million people, through interview of 50 flood victims in south, central and north Kashmir. The study also highlighted role of central and regional governments, army, local volunteers and media during post flood rehabilitation process.

Mohammad Imran Malik, M. Sultan Bhat and Shahnaz Ahmad Najar (2016) analyzed scarcity, mismanagement and growing demand of water in Lidder catchment area of District Anantnag using remote sensing and GIS mapping methodology, in view of vast tourism potential of the region. The study emphasized use of Multi-Criteria Evaluation (MCE) approach for assessment and effective sustainable management of ground water resources.

Javaid Ahmad and Krishna Murthy (2012) studied spatial growth issues, land use patterns and ecological concerns in development of Srinagar city. The study traced pace and direction of urban planning in the capital city from 1971 to 2001 highlighting improper development of basic social infrastructure and inequitable distribution of amenities as well as lack of environment planning which led to rising air/ water/ noise

pollution, water scarcity and traffic congestions across the city; which need urgent administrative attention from city planners.

As per government data published in 'Daily Excelsior', a leading regional newspaper of Jammu and Kashmir, on 14th December, 2022[2], eighty development projects with financial implication of Rs 406 crore have been completed under AMRUT scheme in capital cities of Srinagar and Jammu along with Anantnag town of Jammu & Kashmir, while as contracts have been awarded to 24 projects worth Rs 194.22 crore. These development projects include development of 2,65,802 sewerage and septage connections, out of which 66,500 new sewer connections have been provided till date while as 2,64,642 households have been covered for septage management. Also, 32 drainage projects having one hundred twenty-two logging points are completed while as work on four drainage points is going on. Under component 'development of public parks and green spaces', 13 public parks have been developed while as work on one park is in progress. Also, thirteen green mobility projects have been completed, 1,43,710 street lights installed and 'online building permission system' started in 43 Urba Local Bodies (ULBs) (https://www.dailyexcelsior.com/).

An editorial published in the same newspaper on 22nd December 2022, highlights the role, impact and implementation challenges of AMRUT scheme in Jammu and Kashmir region. The editorial reveals that AMRUT scheme has proven only a partial success in terms of its impact on development and urban planning front, as most of the projects taken up under the scheme in Jammu and Kashmir are either languishing due to undesired delays or simply non-starter. Also, lack of effective and timely coordination between government departments and implementing agencies, has caused immense public inconvenience due to 'dig it, dump it and forget it' policy of local authorities. Dug out roads and drains are kept open with sewage overflowing roads and lanes for months together. Haphazard expansion of these selected cities and towns, frequent urban floods, lack of proper drainage and septage as well as scarcity of drinking water, have become catastrophic (https://www.dailyexcelsior.com).

[2] https://www.dailyexcelsior.com/80-amrut-projects-worth-rs-406-cr-completed-in-mission-cities-of-jk/

To boost sustainable urban development in the region, Government of India released first instalment of Rs 158.597 crore under AMRUT 2.0 to Jammu & Kashmir on 12th July 2023, under which apart from existing cities of Jammu, Srinagar and Anantnag town, other uncovered areas are to be targeted in several districts, including Sopore town, Kulgam town, and a component of the said funds have to be mandatorily used for mass public awareness campaign about these development projects to ensure social outreach and garner public support (https://www.greaterkashmir.com/).

2. Results and Findings from Analysis of Data received through RTI Applications

To receive vital information about functioning of AMRUT scheme in Jammu & Kashmir, details of various projects implemented under the scheme along with their financial as well as physical progress, and impact of AMRUT scheme in Jammu & Kashmir region, a significant amount of data have been received from the concerned departments of Civil Secretariat of Government of Jammu & Kashmir, through RTI applications, which is presented as under-

Table 5.1: Details of Projects implemented under AMRUT 2.0 in Jammu & Kashmir

S. No	Urban Local Body (ULB)	Name of Project	Project Cost (In Crores)	Funds Released (In crores)	BEAMS Code	Current Status
Water Supply Projects						
1	Srinagar	Raw Water line from Preng to Rangil	120.750	29.467	UDDCS-2324100033	In Progress
2	Srinagar	Extension and Replacement in Distribution System to	2.070	1.970	UDDCS-2324100034	Completed

		achieve 100% coverage				
3	Srinagar	Construction of ground water based OHTs at tail ends of Distribution System with complete electromechanical system having 70,000 G capacity OHT at Khadi Mill Aluchibagh	2.790	2.660	UDDCS-2324100035	Completed
4	Srinagar	Construction of groundwater based OHTs at tail ends of distribution system with complete electromechanical system 70,000 G capacity OHT at Dandekhah Batamaloo	2.800	2.670	UDDCS-2324100036	Completed

5	Srinagar	Construction of ground water based OHTs at tail ends of distribution system with complete electromechanical system having 50,000 G capacity OHT at Qamarwari	1.620	1.540	UDDCS-2324100037	Completed
6	Srinagar	Construction of 3 MGD capacity activated Carbon Chamber at WTP Nishat	3.120	2.970	UDDCS-2324100038	Completed
7	Sopore	Water Supply Scheme in Sopore town (Coverage part)	56.980	10.000	UDDCS-2324100039	In Progress
8	Ganderbal	Water Supply Scheme in Ganderbal Town	3.630	3.460	UDDCS-2324100040	Completed

		(Coverage part)				
9	Qazigund	Water Supply scheme in Qazigund Town (Coverage part)	7.350	5.000	UDDCS-2324100041	In Progress
10	Jammu Cantt	Water Supply scheme for Jammu Cantt	4.790	4.350	UDDCS-2324100042	In Progress
11	Vijaypur	Water Supply scheme for Vijaypur Town	2.200	2.000	UDDCS-2324100043	Completed
12	Bhaderwah	Water Supply scheme for Bhaderwah Town	4.620	4.200	UDDCS-2324100044	In Progress
13	Nowshera	Water Supply scheme for Nowshera Town	6.870	6.240	UDDCS-2324100045	In Progress
14	Thatri	Water Supply Scheme for Thatri Town	1.760	1.600	UDDCS-2324100046	Completed

15	Ramnagar	Water Supply Scheme for Ramnagar Town	8.720	7.940	UDDCS-2324100047	In Progress
16	Basholi	Augmentation of Water Supply Scheme in Basholi Town	17.190	10.590	UDDCS-2324100048	In Progress
17	Surankote	Augmentation of Water Supply Scheme in Surankote Town	3.090	2.810	UDDCS-2324100049	Completed
18	Batote	Augmentation of Water Supply Scheme in Batote Town	2.810	2.550	UDDCS-2324100050	Completed
19	Khour	Augmentation of Water Supply Scheme in Khour Town	4.000	3.640	UDDCS-2324100051	In Progress
20	Katra	Augmentation of Water Supply Scheme in Katra Town	12.240	11.130	UDDCS-2324100052	Completed

Sewerage and Septage Management Projects						
1	Jammu	Sewerage Scheme at Talab Tilo Bohri Missing Link Jammu City	24.630	15.670	UDDCS-2324100029	In Progress
2	Jammu	Sewerage Scheme Missing Link Division-A Jammu City	42.670	24.140	UDDCS-2324100030	In Progress
3	Anantnag	Pollution Abatement of River Jhelum at Anantnag Town Zone 2&3	296.380	1.000	UDDCS-2324100031	In Progress
4	Srinagar	Sewerage Scheme for Pollution Abatement of Dal Lake, including Construction of STP for Uncovered	306.050	1.000	UDDCS-2324100032	In Progress

		Area around Dal Lake in Srinagar City				
Grand Total			**939.130**	**158.597**	**Remarks Funds Released (16.88%)**	

5.4 Impact of AMRUT Scheme on Town Planning in Anantnag Municipal Council Area (Research Objective-III)

The present research objective of the study focuses on implementation and progress of AMRUT scheme in Anantnag Municipal Council Area of Jammu & Kashmir, including its effects on transformation of urban landscape in the region, development of basic physical urban infrastructure in Anantnag town as well as facilitation of various public facilities to citizens in Anantnag town. To achieve results and findings for the present objective of the study as well as receive vital public perspectives regarding implementation of AMRUT scheme in Anantnag town, following research methodology has been adopted. The present study designates Anantnag Municipal Council of Jammu & Kashmir as its focal research universe, encompassing all twenty-five municipal wards through methodically designed sampling protocols. Adhering to precedential methodological recommendations, the comprehensive sample size was established at 300 participants, ensuring statistical significance and representational adequacy.

To procure multidimensional insights regarding urban planning initiatives and AMRUT scheme implementation efficacy within the municipal jurisdiction, the participant constellation was intentionally diversified to incorporate multiple stakeholder categories. This heterogeneous sample composition encompasses general population from respective municipal demarcations, elected ward representatives, administrative personnel from the Municipal Council, district administration functionaries, and Development Council affiliates.

The sampling methodology employs a bifurcated approach, utilizing both probabilistic and non-probabilistic techniques for participant selection. The predominant residential sample (n=250) was determined through simple random sampling procedures, extracting ten participants from each municipal ward. Complementarily, purposive sampling methodologies were deployed to identify specialized stakeholders with direct urban planning involvement, including twenty-five ward councillors, ten municipal administrative officers, ten district administration officials, and five Development Council members. The evidentiary foundation integrates both primary and secondary data acquisition channels. Primary data procurement involved structured questionnaires featuring dichotomous and open-ended interrogative components. To augment the investigative depth regarding emergent urban planning complexities, unstructured interview protocols were implemented with key institutional stakeholders, facilitating vital perspective elicitation beyond standardized response parameters.

The residential constituent sample (n=250) participated through formalized questionnaire engagement, while specialized stakeholders contributed through comprehensive unstructured interviews. These included elected ward representatives, municipal administrative personnel, district governance officials, and Development Council members intrinsically connected with citizen empowerment initiatives and public welfare advancement. Supplementary data acquisition occurred through statutory transparency mechanisms including Right to Information applications. Secondary informational sources encompassed scholarly publications, analytical literature, governmental digital repositories, institutional documentation, archival resources, and journalistic accounts, thereby establishing a robust evidentiary foundation for subsequent analytical procedures and interpretative frameworks.

5.4.1 Data Analysis and Interpretation

For the meticulous assessment of acquired empirical evidence, a multifaceted analytical apparatus was deployed, encompassing tabulation, graphical representations, and diagrammatic visualizations, thereby ensuring the derivation of substantive conclusions germane to the present study purview.

The methodological approach to data procurement was strategically calibrated to elicit crucial intelligence regarding the implementation trajectory of the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) within the jurisdictional boundaries of Anantnag Municipal Council in Jammu & Kashmir, emphasizing the scheme's contemporary operational status, developmental progression, and transformative impact on critical urban infrastructure. Its prime focus has been towards scrutinizing optimization of essential civic amenities, including potable water distribution networks, sanitation facilities, waste management systems, drainage infrastructure, septage processing, public transit mechanisms, recreational spaces, and verdant zones, as delineated in the AMRUT policy framework.

The investigative paradigm incorporated a bifocal analytical lens, simultaneously examining the intricacies of urban planning architectonics and the implementation impediments confronting developmental initiatives such as AMRUT within the specified municipal demarcation. The methodological apparatus deployed for data gathering comprised structured questionnaire protocols supplemented by non-standardized interview techniques. Citizen satisfaction metrics regarding the AMRUT initiative's efficacy in cultivating resilient metropolitan infrastructure and enhancing service accessibility were quantitatively assessed utilizing a quinquepartite Likert Scale evaluation framework. This assessment was operationalized through following systematized coding algorithm designed to translate qualitative appraisals into numerical values amenable to statistical interpretation-

Codes used

1. GP= General Public
2. WC= Ward Councillors
3. OS-AMC=Officers and Staff from Anantnag Municipal Council
4. OS-ADA= Officers and Staff from Anantnag District Administration
5. MM-ADDC= Members from Anantnag District Development Council

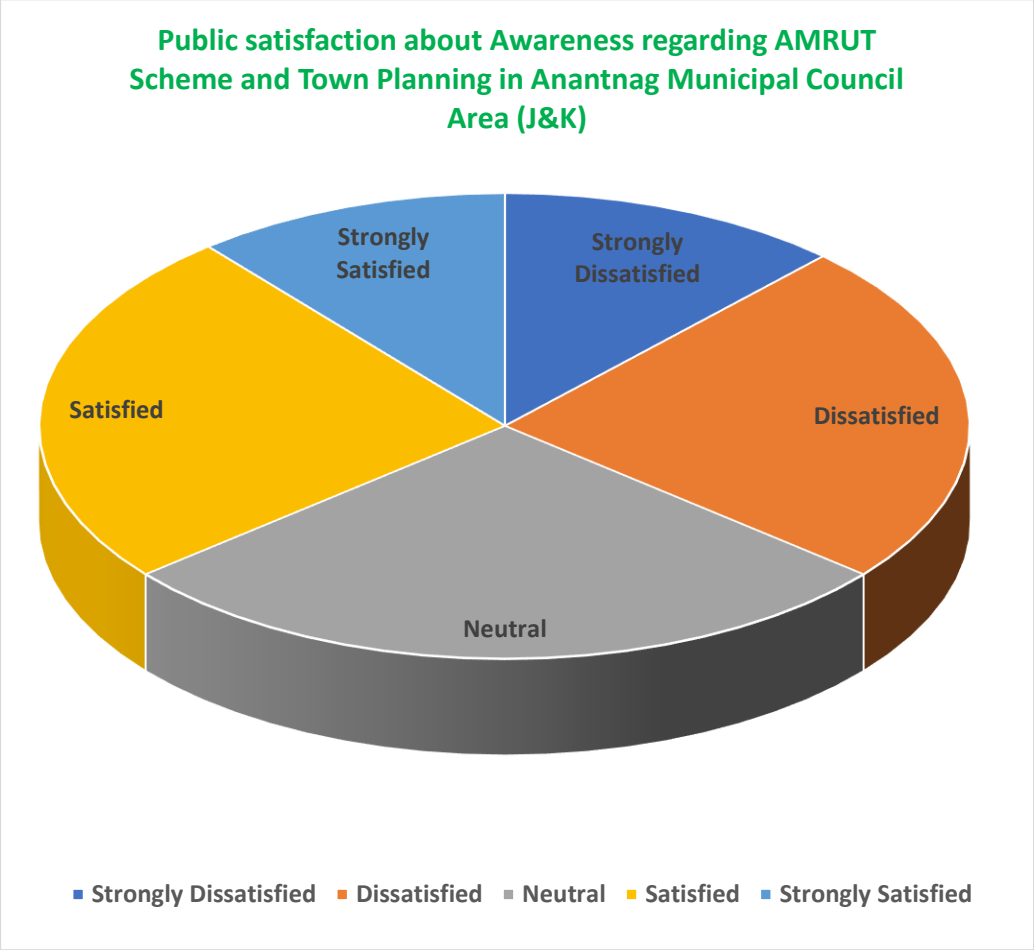
A detailed description of results & findings from comprehensive data analysis in context of the present research objective, is presented below-

5.4.2 Results and Findings for Research Objective-III

1. Public Satisfaction about awareness regarding AMRUT Scheme and Town Planning Initiatives in Anantnag Municipal Council Area

As presented in the figure 5.1 below, the research respondents comprising members from the general public, ward councilors from the selected municipality wards of Anantnag Municipal Council, officers and staff from Anantnag Municipal Council, officers and staff from Anantnag District Administration, and members from Anantnag District Development Council, are partially satisfied with public awareness about town planning initiatives undertaken in the region, especially the projects/ schemes started under the AMRUT mission in the Anantnag Municipal Council.

Figure-5.1: Public satisfaction about awareness regarding AMRUT Scheme and Town Planning in Anantnag Municipal Council Area



2. Public Satisfaction about Impact of AMRUT Scheme on Development of Basic Urban Infrastructure, and improving Accessibility & Quality of Selected Public Services in Anantnag Municipal Council Area

As mentioned in the Chapter-1, the focus areas of AMRUT mission, are drinking water services, sewerage facilities and septage management, storm water drainage, public transportation, public parks, green spaces and recreational facilities. As such, 1-5 Likert scale was used to gauge the level of public satisfaction with respect to impact of AMRUT scheme on improving basic urban infrastructure as well as accessibility and quality of these basic urban services in the Anantnag Municipal Council Area.

The results as presented in tables-5.2 and table-5.3 below, reveal that majority of the citizens/ residents of the Anantnag Municipal Council Area, are either strongly unsatisfied, unsatisfied or partially satisfied about impact of AMRUT scheme on development of basic urban infrastructure as well as improvement in accessibility and quality of selected basic public services, as enunciated under the AMRUT Mission and as delivered in the Anantnag Municipal Council Area of Jammu & Kashmir.

Table-5.2: Public Satisfaction about Impact of AMRUT Scheme on Development of Basic Urban Infrastructure and improvement in Accessibility of Selected Public services in Anantnag Municipal Council Area of J&K

(Scores as per 1-5 Likert Scale)

S. NO	Description of Respondents (→) Basic Infrastructure Development & Public Services (↓)	GP	WC	OS-AMC	OS-ADA	MM-ADDC	Overall Satisfaction (Mean Value-μ)

1.	Drinking Water Services	2	2	3	4	3	**2.8**
2.	Sewerage Facilities and Septage Management	2	3	3	4	3	**3.0**
3.	Drainage Services and Storm Water Management	2	3	3	3	3	**2.8**
4.	Waste Management Services	2	2	3	3	2	**2.4**
5.	Affordable Housing Facilities	2	3	3	3	2	**2.6**
6.	Creation of Well-distributed Public Buildings such as Hospitals, Police Stations and other government offices	3	3	4	4	3	**3.4**
7.	Road Networks, Pedestrian Pathways, Non-Motorized and Sustainable Public Transport Facilities	2	3	3	3	2	**2.6**
8.	Development of Public Parks, Green Spaces & Recreational Services	1	2	3	3	2	**2.2**

9.	Implementation of Innovative & Smart Town Planning Solutions such as e-offices, e-services etc.	2	2	3	3	2	**2.4**
10.	Implementation of Sustainable Development Paradigms, such as rain water storage, use of solar energy, development of pedestrian walkways & cycle tracks, use of non-motorized public transport.	2	2	3	3	2	**2.4**
Over all Mean Value (μ)		**2.0**	**2.50**	**3.10**	**3.30**	**2.40**	**2.66**

The overall mean value of **μ**-2.66, reveals that the research respondents, in general, including members from general public, ward councilors, officers from Anantnag Municipal Council, officers from Anantnag district administration and members from Anantnag district development council, are only partially satisfied with impact of AMRUT scheme on development of urban infrastructure and improvement in accessibility of selected public services as provided under the AMRUT scheme in the Anantnag Municipal Council Area.

The highest mean value for creation of uniformly distributed vital public buildings such as hospitals, police stations and other government offices in Anantnag Municipal

Council Area (**μ**-3.4), reflect higher public satisfaction about development of infrastructure and promoting accessibility in context of these services. This is due to the fact that central government recently announced upgradation of district hospital of Anantnag into full-fledged Government Medical College with upgradation of allied hospital infrastructure in line with National Medical Council (NMC) guidelines. Although, development of such infrastructure is still in progress. Similarly, several other official buildings are being upgraded through convergence of allied development schemes and fund-pooling mechanism.

In contrast, development of green spaces, public parks and recreational services, particularly at community/ ward level across the Anantnag Municipal Council Area (Mean Value, μ-2.2), show least satisfaction of the research respondents about impact of AMRUT scheme on development of basic urban infrastructure in this context and provide accessibility to general public to avail such services. It is pertinent to mention here, that upgradation of green spaces, public parks, as well as recreational facilities, has been vital focus area under United Nations Sustainable Development Goals framework, and most urgent concern for promoting healthy urban life style, more so due to recent COVID-19 pandemic, as well as prevalent increase of obesity, diabetes, strokes, cardiac arrests and respiratory diseases in urban population.

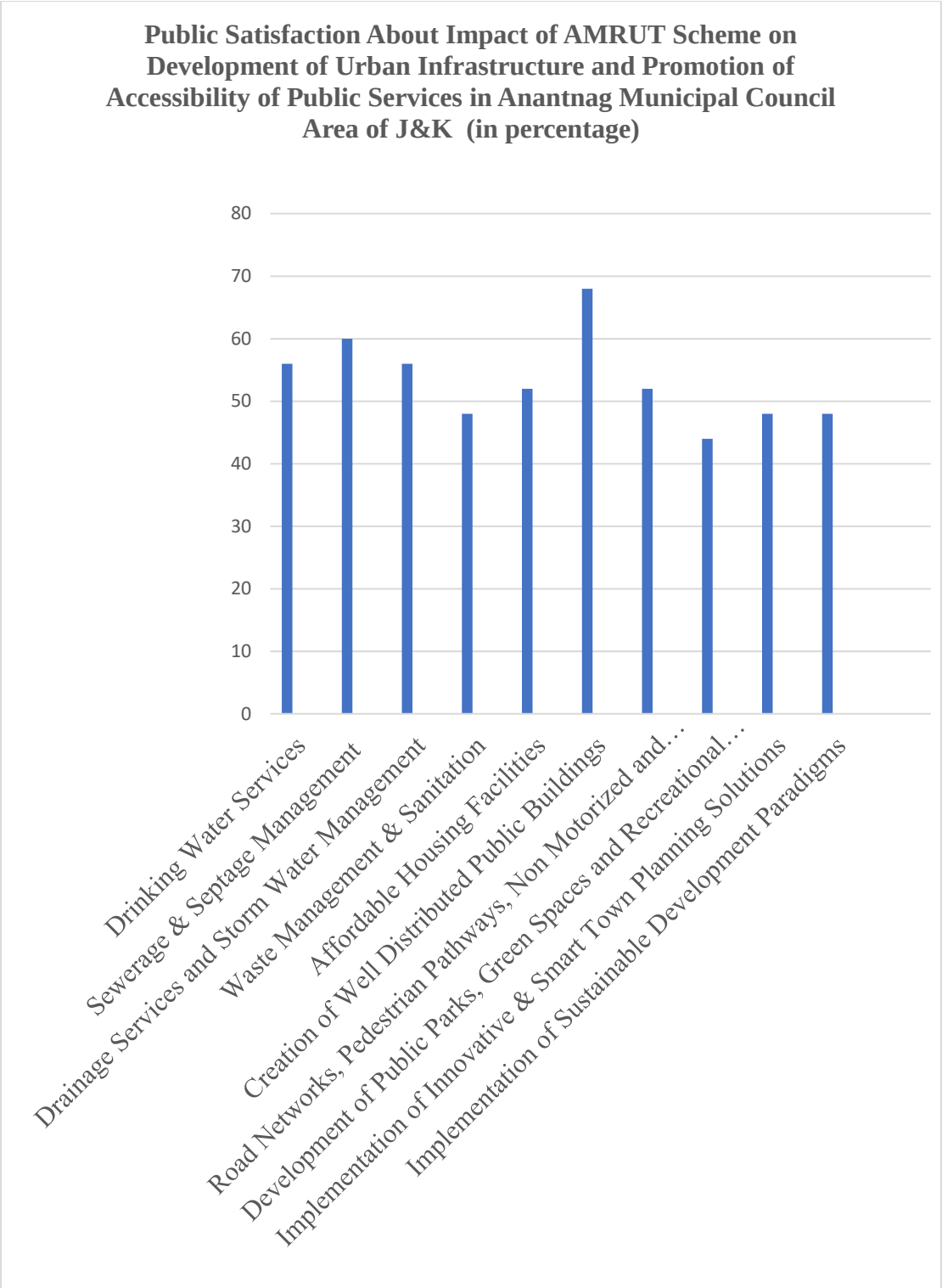


Figure- 5.2: Public Satisfaction about Impact of AMRUT Scheme on Development of Urban Infrastructure and Promotion of Accessibility of Public services in Anantnag Municipal Council Area of J&K

Table-5.3: Public Satisfaction about Impact of AMRUT Scheme on Improving Quality of Selected Public Services in Anantnag Municipal Council Area of J&K (Scores as per 1-5 Likert Scale)

S. NO	Description of Respondents (→) / Selected Public Services (↓)	GP	WC	OS-AMC	OS-ADA	MM-ADDC	Overall Satisfaction (Mean Value-μ)
1.	Drinking Water Services	2	3	4	4	3	**3.20**
2.	Sewerage Facilities and Septage Management	2	3	3	4	3	**3.00**
3.	Drainage Services and Storm Water Management	2	3	3	3	3	**2.80**
4.	Waste Management Services	2	2	3	3	3	**2.60**
5.	Affordable Housing Facilities	2	3	3	3	2	**2.60**
6.	Creation of Well-distributed Public Buildings such as Hospitals, Police Stations and other government offices	2	2	3	3	2	**2.40**
7.	Road Networks, Pedestrian Pathways, Non-Motorized and Sustainable Public Transport Facilities	2	3	3	3	3	**2.80**

8.	Development of Public Parks, Green Spaces & Recreational Services	1	2	3	3	2	**2.20**
9.	Implementation of Innovative & Smart Town Planning Solutions such as e-offices, e-services etc.	2	3	4	3	3	**3.00**
10.	Implementation of Sustainable Development Paradigms, such as rain water storage, use of solar energy, development of pedestrian walkways & cycle tracks, use of non-motorized public transport	2	2	3	3	2	**2.40**
Over all Mean Value (μ)		**1.90**	**2.60**	**3.20**	**3.20**	**2.60**	**2.70**

The overall mean value of **(μ-** 2.70) reveals that the research respondents, in general, are poorly satisfied with the quality of selected public services as provided under the AMRUT scheme in the Anantnag Municipal Council Area. The highest mean value for drinking water facilities, reveal higher satisfaction of respondents regarding quality of drinking water being provided in Anantnag Municipal Council, which is due to the fact that major portion of this water used for drinking purposes in Anantnag town, comes from multiple natural springs existing in vicinity of the town. Although, these springs

as well as their down streams are also now suffering from ever increasing pollution due to garbage and household waste being thrown into them.

In contrast, development of green spaces, public parks, as well as recreational services **(μ-** 2.20), creation of well distributed public buildings such as hospitals etc. **(μ-** 2.40), and implementation of sustainable development paradigms **(μ- 2.40**), show least satisfaction of the research respondents about quality of these services being provided in the Anantnag Municipal Council Area. This is due to the fact that public parks, green spaces as well as recreational areas, are mostly non-existent at community/ward level in the Anantnag town, and wherever such facilities are available, they are poorly developed, despite the town being abode of approximately half a million population. Similarly, most of the research respondents highlighted the concern of poor quality and shabby look of government buildings and public offices, including hospitals, schools, police stations, municipality offices, and offices of other government departments under the Anantnag district administration, with unhygienic walls, corridors, lawns, lack of public spaces and absence of basic facilities in public waiting areas, including absence of public lavatories.

Also, the level of public satisfaction with regard to impact of AMRUT scheme on implementation of sustainable development paradigms in Anantnag town **(μ- 2.40**), reveals that least efforts have been put towards incorporation of sustainability and ecofriendly mechanisms in town planning process, such as conservation ponds for rain water storage and harvesting, widespread use of solar panels in individual households and mandatory installation of solar panels in government offices, development of dedicated and quality pedestrian pathways and cycle tracks, and most essentially adaptation of non-motorized public transport facilities such as E-buses, E-rickshaws etc.

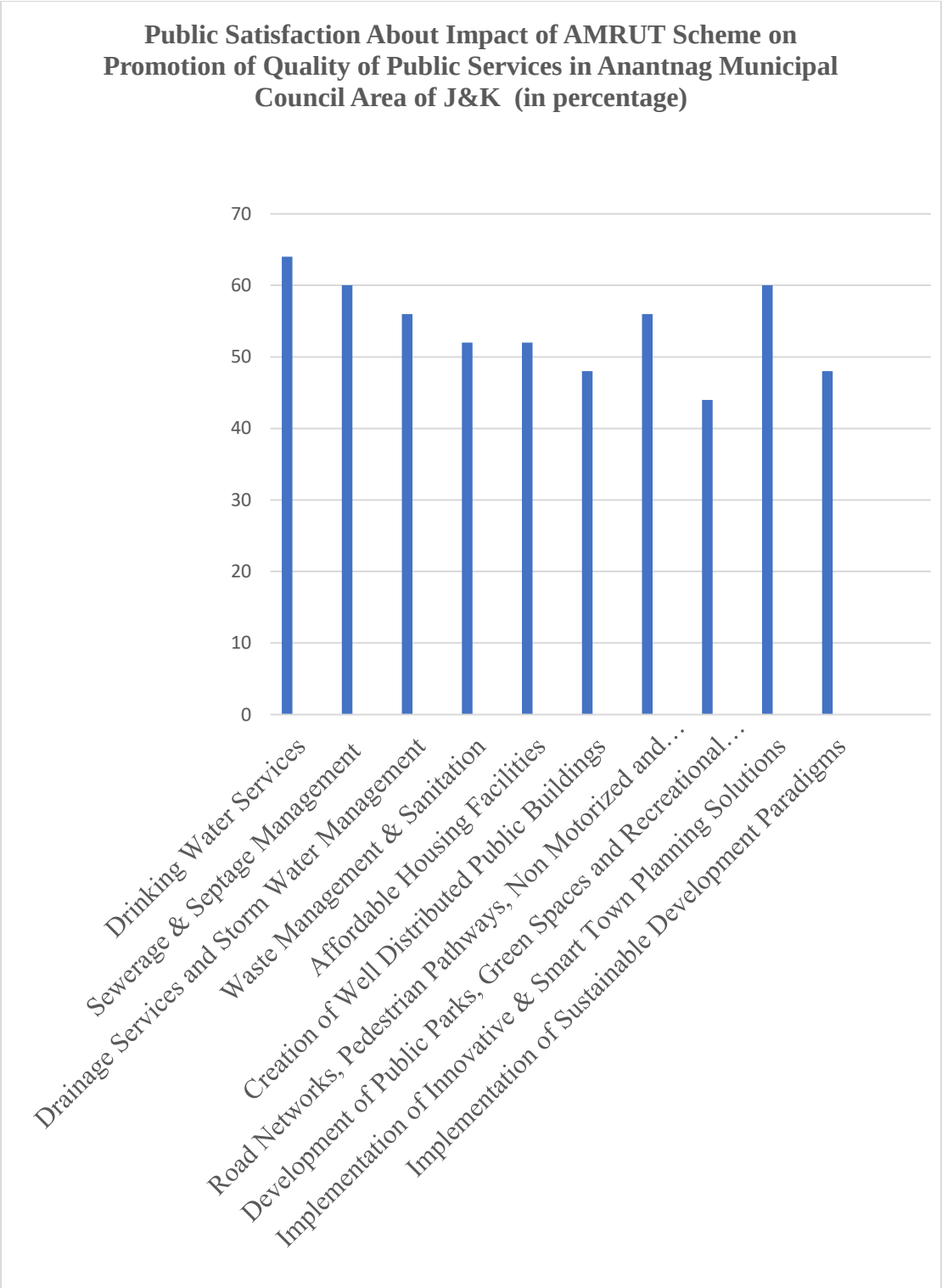


Figure-5.3: Public Satisfaction about Impact of AMRUT Scheme on Promotion of Quality of Selected Public services in Anantnag Municipal Council Area of J&K

3. Data received through RTI Applications

A significant amount of research data has been received from the concerned administrative departments and development agencies of Anantnag district, using Right to Information (RTI) applications, giving vital information about multiple development projects/ schemes which have been taken up under AMRUT Mission, and are currently either completed or in progress, in Anantnag Municipal Council Area. The received data provides comprehensive details about physical and financial status of these projects/ schemes implemented under AMRUT scheme, including allocation of funds to particular projects, status of fund utilization, projects' timeline, and expected outcome of these projects. As per the received data, following projects/ schemes have been started/ completed under AMRUT scheme in Anantnag Municipal Council Area-

Table-5.4: Details of projects implemented under AMRUT mission in Anantnag Municipal Council Area (Data Received through RTI Applications)

S. No	Executing Agency	Description of work	Funds Allocation (in Lacs)	Physical Status	Financial Status
AMRUT 1.0					
1.	UEED Srinagar	Sewerage Treatment Plant (4MLD)	1390.00	100% Completed	------
2.		Septage Treatment Plant (62 KLD)	330.00	100% Completed	------

3.		Sewerage System by way of laying of Sewers including House Connections	1682.00	100% Completed	------
4.		Construction of IPS (Intermediate Pumping Station) at GBS Anantnag	67.60	100% Completed	------
5.	Erstwhile Town Drainage Division Kashmir	Drainage System in Anantnag Town	Civil Works- Phase-I: 407.00 Phase-II: 800.00 Procurement of Suckers- 250.00	Civil Works- 100% Completed Procurement of 8 Suckers- 100% Completed	--------
6.		Development of Shirpora Park	DPR- 56.00	100% Completed	----------

	Floriculture Department		Allotted- 47.79		
7.		Development of Khanabal Corridor	DPR- 30.83 Allotted- 16.00	100% Completed	----------
8.	PWD (R&B) Division Khanabal	Multi-level Car Parking Facility at Janglat Mandi	1600.02	100% Completed	1513.00
9.	PHE Division Bijbehara	Water Supply for University Area	620.00	100% Completed	551.00
AMRUT 2.0					
1.	Irrigation Division Anantnag	Rejuvenation of Spring at Reshimol Sahib Dabruna, Anantnag	22.06	90% Completed	---------

4. Town Planning Challenges in Anantnag Municipal Council Area

Comprehensive and detailed information was sought from multiple stakeholders, including members from general public, ward councilors, officers and staff from Anantnag Municipal Council, officers and staff from Anantnag District Administration, and members from Anantnag District Development Council, regarding the vital town planning challenges, development concerns as well as issues of implementation of town planning projects such as AMRUT scheme in Anantnag Municipal Council area, using structured questionnaires and unstructured interview techniques.

As per the comprehensive analysis of the received data, the prime challenges of town planning, development concerns and implementation issues of AMRUT mission in the Anantnag Municipal Council region, as specified by most of the research respondents, include-

a) Inadequate drainage infrastructure

b) Poor waste management, especially lack of door-to-door collection of household waste, segregation of waste at source, proper waste disposal mechanism, and adoption of waste recycling technologies.

c) Poor public transportation services, including dilapidated roads/ lanes in most of the areas, traffic congestion especially in central commercial centre of the Anantnag Municipal Council, lack of optimum parking spaces, lack of adoption of ICT tools for smart traffic management systems, and absence of sustainable public mobility solutions such as cycling tracks & pedestrian walkways.

d) Lack of community level public parks, open spaces, green spaces and recreational facilities, in most of the areas under Anantnag Municipal Council jurisdiction.

e) Poor electricity services for both residential and commercial use.

f) Deficient administrative coordination between public agencies operating in Anantnag Municipal Council region, and implementing AMRUT Mission in the region.

g) Lack of Public Awareness about urban planning and welfare programs which diminishes the prospects for participatory development and results in poor public support for these programs/ schemes.

h) Insufficient focus towards incorporation of sustainable development paradigms, such as use of roof top solar panels for both residential and commercial buildings, wide spread use of e-transport like E-buses and E-rickshaws, development of cycling tracks, and as mentioned above lack of green and open spaces.

i) Lack of public lavatories, especially for women and children.

However, the research respondents were appreciative of the recent government efforts towards construction of multi-level parking space at Janglat Mandi area (near District Hospital & Govt. Medical College Anantnag), old SRTC yard and few other places, as well as introduction of E-Rickshaws for public transportation, albiet, such services only available in central Lal chowk.

5.5 Efficacy of AMRUT Scheme to Realize the SDG-11 Targets in Anantnag Municipal Council Area (Research Objective-IV)

The present research objective of the study highlights efficacy and effectiveness of AMRUT scheme as vital national flagship urban planning initiative in context of promotion of sustainable development interventions and innovative technological solutions for better quality of urban life, facilitation of optimum basic public services in sustainable and eco-friendly manner and achievement of various targets as enunciated under United Nations' Eleventh Sustainable Development Goal-Sustainable Cities and Communities (SDG-11), in Anantnag Municipal Council Area of Jammu & Kashmir.

In achievement of the present research objective, the study focused on evaluation of various development schemes as implemented by district administration of Anantnag, under AMRUT mission, to facilitate sustainable development paradigms in the region, such as facilitation of better provisions of drinking water supply, conservation of water bodies, adoption of solar energy for residential and commercial use, use of battery-operated e-buses and e-rikshaws, development of pedestrian pathways and cycle tracks,

development of open areas, public parks, green spaces and recreational services, developing facilities for rain water harvesting, cleaning of rivers and streams, avenues for proper waste management, waste recycling and segregation of waste at source, development of optimum drainage services etc. The study also aimed to gauge the public satisfaction about impact of AMRUT scheme on realizing these sustainable development initiatives as implemented in the Anantnag Municipal Council Area.

As followed in the previous objective, same research methodology has been used here as well, designating Anantnag Municipal Council of Jammu & Kashmir as its research universe, with specific attention to evaluating sustainable urban development initiatives. Employing Simple Random Sampling Technique, the research extracts a comprehensive sample of 300 participants distributed across the council's 25 municipality wards. To procure multidimensional perspectives regarding sustainable town planning paradigms, particularly the AMRUT scheme's efficacy in actualizing the United Nations' Eleventh Sustainable Development Goal (SDG-11: Sustainable Cities and Communities), the research incorporates a heterogeneous sample comprising diverse stakeholders. These include public from all 25 municipality wards, ward councillors, administrative personnel from Anantnag Municipal Council, district administration officials, and representatives from the Anantnag District Development Council.

The sampling methodology synthesizes both probability and non-probability techniques to optimize representativeness, while data collection encompasses both primary and secondary data acquisition mechanisms. Primary data collection utilizes structured questionnaires featuring dichotomous and open-format inquiries. Additionally, unstructured interview protocols were implemented to elicit nuanced perspectives from key stakeholders regarding AMRUT's impact on sustainable development implementation and SDG-11 target realization.

Specific data procurement involved 250 community respondents through structured questionnaires, while unstructured interviews were conducted with 25 Ward Councillors, 10 municipal officers, 10 district administration officials, and 5 District Development Council members engaged in civic empowerment initiatives.

Supplementary data was obtained through Right to Information applications and secondary sources including scholarly publications, institutional documentation, governmental repositories, archival materials, and journalistic resources.

5.5.1 Data Analysis and Interpretation

To facilitate comprehensive examination of procured empirical and archival evidence, and to derive substantive findings pursuant to the present objective, this study employs a methodological plurality of analytical instruments, including tabular representations, cartographic visualizations, graphical depictions, columnar illustrations, and diverse statistical computational mechanisms.

In accordance with the research imperative, data acquisition protocols were strategically oriented toward eliciting critical insights regarding the operational efficacy and implementation effectiveness of the AMRUT scheme's sustainable development initiatives within the Anantnag Municipal Council jurisdiction of Jammu & Kashmir. These initiatives were evaluated against the normative benchmarks established under the United Nations' SDG-11 parameters, with particular emphasis on respondents' satisfaction with these interventions.

Consequently, these thematic inquiries were explored through extensive engagement with study participants, utilizing both structured questionnaires and non-standardized interview methodologies. The quantification of public satisfaction metrics was accomplished through implementation of a pentametric Likert assessment continuum, operationalized via the following algorithmic codification formula-

Codes used

I.	GP=	General Public
II.	WC=	Ward Councillors
III.	OS-AMC=	Officers and Staff from Anantnag Municipal Council
IV.	OS-ADA=	Officers and Staff from Anantnag District Administration
V.	MM-ADDC=	Members from Anantnag District Development Council

The analysis specifically investigates the dialectical relationship between policy implementation and experiential outcomes, scrutinizing the concordance between administrative execution and communal perception. This analytical framework enables rigorous evaluation of sustainable urban development paradigms as manifested within the localized context, thereby contributing substantive empirical evidence to the broader scholarly discourse on municipal governance effectiveness in environmentally conscious infrastructure development.

Results & findings from comprehensive analysis of received data, in context of the present research objective, is presented below.

5.5.2 Results and Findings of the Present Research Objective

1. Public Satisfaction about Efficacy of AMRUT Mission in implementation of SDG-11 Targets in Anantnag Municipal Council Area

As world is witnessing alarming challenges of global warming, climate change, scarcity of natural resources, unprecedented growth in urban population, as well as unacceptable levels of environment pollution, governments across the world are focusing towards adoption of renewable energy resources, sustainable technological interventions and innovative solutions, especially in urban areas, to mitigate these development challenges as well as to provide better civic services to the citizens. In this context, as mentioned earlier, Government of India envisaged AMRUT mission as vital national project to mitigate these urban planning challenges in Indian cities and towns, including Anantnag Municipal Council of Jammu and Kashmir.

As such, the data collection as well as the data analysis under the present research objective focuses on evaluation of impact of AMRUT mission on adoption of sustainable development interventions and SDG-11 targets in Anantnag Municipal Council Area, and public satisfaction with respect to these initiatives implemented under AMRUT mission, was measured on a 1-5 Likert scale.

Results reflected in table-5.5 below, highlight that most of these respondents are partially satisfied regarding effectiveness of AMRUT Mission and other regional urban

planning initiatives in implementation of sustainable development mechanisms as targeted under SDG-11, in Anantnag Municipal Council Area.

Table-5.5: Public Satisfaction about Efficacy of AMRUT Scheme in Implementation of Sustainable Development Mechanisms as envisaged under SDG-11 Targets in Anantnag Municipal Council Area of J&K
(Scores as per 1-5 Likert Scale)

S. NO	Description of Respondents (→) / Services under SDG-11 Targets (↓)	GP	WC	OS-AMC	OS-ADA	MM-ADDC	Overall Satisfaction (Mean Value-μ)
1.	Safe and Affordable Housing	2	3	4	4	3	**3.20**
2.	Affordable and Sustainable Transport Systems	2	3	3	3	2	**2.60**
3.	Inclusive and Sustainable Urbanization	2	3	3	4	2	**2.80**
4.	Protection of Cultural and Natural Heritage	2	3	3	3	3	**2.80**
5.	Reduce adverse effects of Natural Disasters	2	3	3	3	2	**2.60**
6.	Reduce the Environmental Impact of Cities	2	2	3	3	2	**2.40**

7.	Provide Access to Safe and Inclusive Green and Public Spaces i.e. Public Parks & Recreational Services	2	2	3	3	2	**2.40**
8.	Implementation of Innovative & Smart Town Planning Solutions such as e-offices, e-services etc.	3	3	4	3	3	**3.20**
9.	Implementation of Sustainable Development Paradigms, such as rain water storage, use of solar energy, development of pedestrian walkways & cycle tracks, use of non-motorized public transport.	2	2	3	3	2	**2.40**
Over all Mean Value (μ)		**2.11**	**2.67**	**3.22**	**3.22**	**2.33**	**2.71**

Mean value of **μ**-2.71, reflects that these research respondents are partially satisfied with the effectiveness of AMRUT Scheme for promotion of sustainable development initiatives and realization of targets as incorporated under the United Nations' SDG-11 framework, in the Anantnag Municipal Council Area.

The highest mean values of **μ**-3.20 for safe and affordable housing facilities and implementation of innovative & smart town planning solutions (e-offices, e-services etc.), reflect higher public satisfaction about effectiveness of AMRUT scheme and other government initiatives adopted for promotion of these services. Lowest mean value of **μ**-2.40 for services, including reducing the environmental impact of cities, providing access to safe and inclusive green spaces and public spaces i.e. public parks and recreational areas, and implementation of sustainable development paradigms such as rain water storage, use of solar energy, development of pedestrian walkways and cycle tracks as well as use of non-motorized public transport services, reflect least satisfaction of the research respondents about the effectiveness of AMRUT scheme and other town planning initiatives about development of these vital sustainability services.

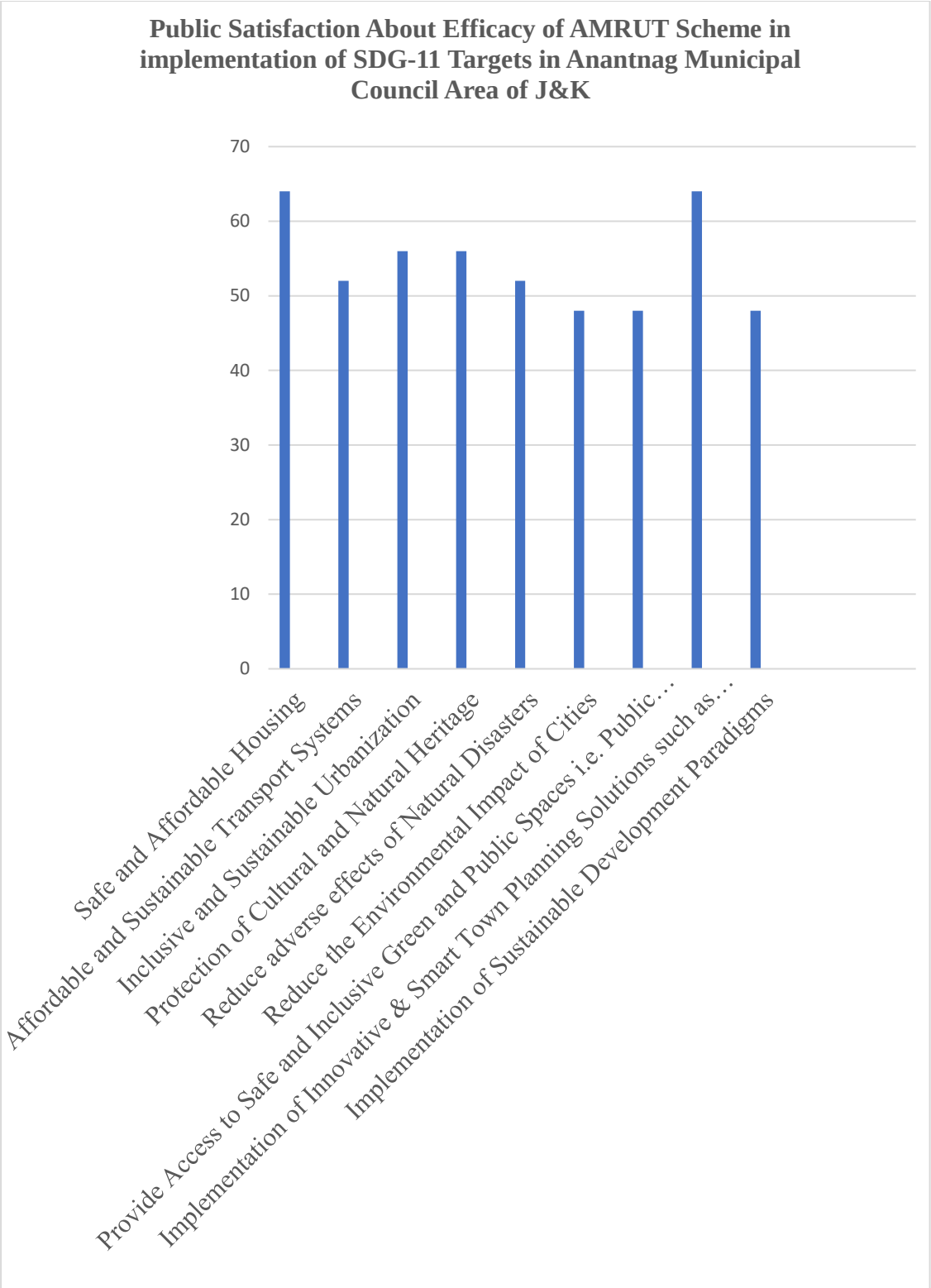


Figure 5.4: Public Satisfaction about Efficacy of AMRUT Scheme in implementation of SDG-11 Targets in Anantnag Municipal Council Area of J&K

5.6 Role of Local Urban Government in Implementation of AMRUT Scheme in Anantnag Municipal Council Area (Research Objective-V)

A municipal council area is a political subdivision of a state within which a municipal corporation or municipal council is established to provide general local governance for a specific population residing in a defined area. Municipal councils or urban local bodies (ULBs), are designated as city, borough, town etc. The rapid urbanization, particularly in the last several decades, led to global attention towards adoption of decentralized and integrated development approaches in cities and towns. The local urban government institutions were created across the countries by political and administrative decentralization, which facilitated empowerment of regional authorities through delegation of decision-making powers, functional authority and financial autonomy, to ensure area-specific urban development as per needs and aspirations of local populace, through bottom-up planning approach. These urban development authorities are variedly named in different countries such as municipalities and town area committees in India, arrondissements and communes in France, Town Councils in USA etc.

These local urban governments are created and regulated under the provisions of state constitution or a specific law. The elected representatives run day to day affairs of the municipalities, including framing and implementation of development policies, providing various urban services like sanitation, drinking water, electricity, transportation, education and health, regulation and supervision of local government offices and levying of several municipal taxes.

The municipal institutions/ urban local bodies play pivotal role in development of cities and town planning by acting as bridge between the state/national government and citizens in ensuring participatory democracy and inclusive development, wherein the development inputs and mitigation suggestions are received through public representatives and public support for implementation regional and national policies is solicited from all stakeholders. In the present era, these urban authorities have emerged as catalysts of social change and drivers of economic growth.

The Atal Mission for Rejuvenation and Urban Transformation (AMRUT) scheme, launched by the Government of India in 2015, aims to enhance urban living standards

by providing basic civic amenities and creating sustainable infrastructure. In the context of the Anantnag Municipal Council (AMC) in Jammu & Kashmir, the local urban government's role is pivotal in implementing the scheme effectively and ensuring its alignment with local developmental needs. The AMC serves as the primary administrative authority responsible for executing AMRUT projects, including water supply augmentation, sewage and septage management, stormwater drainage, urban transport enhancement, and the creation of green spaces. The council's responsibilities extend to planning, resource allocation, and stakeholder engagement to ensure inclusivity and participatory governance. Additionally, it must maintain strict compliance with the scheme's performance-based funding model, requiring measurable outcomes in service delivery.

One of the primary challenges faced by the AMC in implementing AMRUT is the region's unique geopolitical context, characterized by periodic unrest and logistical constraints. To mitigate these challenges, the council collaborates with state and central government agencies to secure funding, technical expertise, and policy support. Furthermore, leveraging modern technologies, such as Geographic Information Systems (GIS) and real-time monitoring systems, enhances project efficiency and transparency. Public awareness and community participation are equally vital for the scheme's success. The AMC fosters citizen engagement through public consultations and feedback mechanisms, thereby tailoring interventions to address specific local needs.

In conclusion, the Anantnag Municipal Council’s proactive involvement and adaptive governance are instrumental in actualizing the objectives of the AMRUT scheme. By addressing infrastructural gaps and fostering a sustainable urban ecosystem, the council contributes significantly to the holistic development of the region.

5.6.1 Impact of 74th Constitutional Amendment Act-1992 on Local Urban Government

Towns and cities are pillars of socio-economic development of the country, providing livelihood opportunities, education, employment, trade and commerce services to

millions of the citizens. To keep this economic transformation in line with needs and realities at the grassroot level, involve people and their representatives in the planning and implementation of the development programmes, and to ensure democratic decentralization at grassroot level by empowering the municipalities across the country, Parliament of India passed 74th Constitutional Amendment Act on 23rd December, 1992. It received the assent of President on 20th April, 1993 and came into force on 1st June, 1993 (https://www.india.gov.in). The amendment introduced a new part namely, Part IX-A in the Indian Constitution, entitled 'The Municipalities', with addition of articles 243-P to 243-ZG which deals with the issues relating to municipalities and empowered them through various provisions such as constitution of municipalities, composition of municipalities, constitution of wards committees, reservation of seats for SC/ST/OBC and women, duration of municipalities, elections to municipalities, finances of municipalities, establishment of state finance commissions and measures for audit of municipal accounts.

The 74th Constitutional Amendment Act-1992 also added twelfth schedule (12th Schedule) to the constitution of India, which outline the basic powers, authority and responsibilities of these urban governance institutions, along with a detailed list of eighteen public functions to be governed and managed entirely under the guidance of these development institutions. The amendment provides for three types of municipalities in India- a Nagar Panchayat for a transitional area, a Municipal Council for a relatively smaller urban region, and a Municipal Corporation for a larger irban region.

The predominant and salient features of the 74th Constitutional Amendment Act, are empowerment of urban local bodies through provisions of 'delegation of Powers and Functions to Municipalities', formation of District Planning Committees (DPCs) and Metropolitan Planning Committees. The municipalities were empowered with such powers and responsibilities as may be necessary to enable them to function as effective institutions of self-government such as preparation of plans for economic development and social justice and for implementation of schemes as may be entrusted to them. Municipalities are also empowered to discharge functions regarding planning and allocation of resources within their respective jurisdictions under political and administrative decentralization mechanisms thus paving way for 'Bottom-Up Planning

Approach'- which became basis for formation of National Institution for Transforming India (NITI-Aayog) while replacing erstwhile national Planning Commission.

Provisions are also made for the constitution of a Planning Committee at the district level to consolidate plans prepared by the Panchayats and the Municipalities and preparing a development plan for the district as whole, in an aim to integrate the planning process. The Draft District Development Plan so prepared and recommended by the District Planning Committee is forwarded by the Chairperson of the Committee to the State Government. Similarly, the amendment provides for constitution of 'Metropolitan Planning Committees' for Metropolitan areas with a population of 10 lakhs or more. These Metropolitan Planning Committees prepare draft development plans for the metropolitan areas, while receiving inputs from the plans prepared by the Municipalities and the Panchayats in the metropolitan area.

As such, the 74th Constitutional Amendment Act-1992 has been a watershed movement in transformation of urban landscape by facilitating upliftment of grass root democratic institutions, promotion of localized development planning, fulfilment of inclusive development goals by involving local public representatives in decision-making process, and implementation of regional and national public welfare schemes through urban local bodies.

5.6.2 Data Analysis and Interpretation for Research Objective-V

In adherence to methodological parameters established through previous recommendations, the current research objective maintains a sample population of 50 participants. To procure comprehensive insights regarding the functional purview, administrative responsibilities, and operational efficacy of Urban Local Bodies (ULBs), encompassing municipalities and town area committees, particularly regarding their facilitative capacity in socioeconomic advancement, sustainable urban development, and implementation of national urban planning initiatives such as the Atal Mission for Rejuvenation and Urban Transformation (AMRUT), a strategically diversified participant cohort was constituted.

The study protocol employed non-probability/purposive sampling methodologies to identify participants possessing direct operational nexus with urban planning mechanisms within the Anantnag Municipal jurisdiction. This heterogeneous sample

comprises twenty-five elected ward councillors representing the respective administrative divisions of Anantnag Municipal Council, ten administrative personnel and functionaries from the municipal governance structure, ten officers from the district administration, and five members of the Anantnag District Development Council (DDC) who maintain direct engagement with district-wide developmental trajectories and the implementation of regional and national urban planning paradigms.

Data acquisition proceeded through both primary and secondary channels. Primary data collection utilized unstructured interview techniques to elicit comprehensive perspectives from key stakeholders regarding the institutional role, jurisdictional responsibilities, operational effectiveness, and systemic challenges confronting ULBs in urban development contexts, with particular emphasis on AMRUT scheme implementation within the Jammu & Kashmir region. Supplementary data acquisition proceeded through examination of scholarly publications, analytical reviews, institutional documentation, governmental repositories, public media sources, and formal information requests through Right to Information Act (RTI) mechanisms.

Analytical processing of acquired data employed multiple evaluative instruments including tabular representations, graphical illustrations, statistical charts, and comparative diagrammatic analyses, with focus centered on procuring critical insights regarding the institutional capacity of ULBs in urban planning processes, implementation of developmental initiatives, jurisdictional authority, administrative responsibilities, and transformative efficacy in urban governance paradigms. Stakeholder satisfaction regarding ULB effectiveness, particularly concerning the Anantnag Municipal Council's facilitation of urban planning frameworks and AMRUT implementation, underwent quantitative assessment utilizing a Likert scale measurement instrument with a 1-5 evaluative continuum and corresponding coding framework, as follows-

Codes used

1. WC= Ward Councillors
2. OS-AMC=Officers and Staff from Anantnag Municipal Council

3. OS-ADA= Officers and Staff from Anantnag District Administration
4. MM-ADDC= Members from Anantnag District Development Council

Results & findings from comprehensive analysis of received data in context of the present research objective, is presented below-

5.6.3 Results and Findings

1. Perspective of Municipality Ward Councillors about Role of Local Urban Government (ULBs) in Implementation of AMRUT Scheme

For the purpose of present research objective, vital data insights and valuable information about role, authority, responsibilities and effectiveness of local urban government (ULBs), were received from selected twenty five ward councillors of the respective twenty five municipality wards of the Anantnag Municipal Council, using personal interview/ unstructured interview technique. The selected research respondents highlighted the contribution of regional administration of Jammu & Kashmir and central government towards empowerment of these urban development institutions, especially facilitating establishment of comprehensive three-tier Panchayat Raj System in Jammu & Kashmir, and holding of first ever elections for Block Development Councils (BDCs) and District Development Councils (DDCs) in 2020 AD, and thus laying foundations for integrated mechanism of local self-government in the region (https://www.secjk.nic.in/).

They also acknowledged importance of 74th Constitutional Amendment Act-1992 in context of providing constitutional status, legal identity and authority, devolution of specified functional powers and responsibilities, and facilitating financial autonomy to the local urban government institutions across the country, although these provisions were adopted in Panchayat Raj System of Jammu & Kashmir only after abrogation of Article-370 and Article-35A of the Constitution of India on 5th August 2019. In terms of contribution of these urban development institutions towards implementation of AMRUT scheme, especially in context of Anantnag Municipal Council of Jammu & Kashmir, the research respondents accentuate various functions and responsibilities as delegated to these ULBs to optimize effective implementation of town planning

schemes such as AMRUT, including the following functions as provided under Article-243W in twelfth schedule of Indian Constitution, such as-

1. Urban Planning, including town planning
2. Regulation of land use and construction of buildings
3. Planning for economic and social development
4. Roads and Bridges
5. Water supply for domestic, industrial and commercial purposes
6. Public health, sanitation conservance and solid waste management
7. Fire services
8. Urban forestry, protection of the environment, and promotion of ecological aspects
9. Safe guarding the interests of weaker sections of society, including the handicapped (divyangs) and mentally retarded
10. Slum improvement and upgradation
11. Urban poverty alleviation
12. Provision of urban amenities and facilities, such as parks, gardens and play grounds
13. Promotion of cultural, educational and aesthetic aspects
14. Burials and burial grounds (Cremation grounds and electric crematoriums)
15. Cattle pounds, prevention of cruelty to animals
16. Vital statistics, including registration of births and deaths
17. Public amenities, including street lighting, parking lots and public conveniences
18. Regulation of slaughter houses and tanneries

2. Perspective of Officers and Staff from Anantnag Municipal Council about Role of Local Urban Government (ULBs) in Implementation of AMRUT Scheme

For the purpose of present research objective, valuable insights were received from ten officers and staff of Anantnag Municipal Council of Jammu and Kashmir, regarding role, responsibilities, authority, functions and contribution of local urban government towards facilitation of AMRUT like town planning paradigms, using personal interview/ unstructured interview method.

These research respondents, including worthy Chairperson of Anantnag Municipality Council, Deputy Chairperson of Anantnag Municipality Council, Chief Town Planner and other officers/ staff, also emphasized empowerment of ULBs across India, especially in Jammu and Kashmir region, due to implementation of 74th Constitutional Amendment Act-1992, and transfer of powers, authority and responsibilities to ULBs under this amendment, to enable these development agencies act as catalysts of social change and nuclei of local self-government.

According to these research respondents, creation of third tier of government in shape of PRIs, has been turning point in transformation of urban planning process in cities and towns, as it ensured development of basic urban physical infrastructure in cities and towns such as development of public offices- educational institutions, hospitals, police stations, fire service stations etc; along with augmentation of vital urban services to the citizens such as provisions for proper housing, drinking water, electricity, education, waste management, drainage and septage management, roads and lanes, public transportation etc.

They also emphasized the contribution of regional administration of Jammu & Kashmir and central government, towards empowerment of local urban government institutions in Jammu & Kashmir, through aforementioned constitutional and legal amendments, as well as facilitation of functional and financial autonomy to these institutions regarding town planning, such as powers for convergence of development schemes, pooling of funds from different sources and levying of taxes on different urban services, among others.

3. Perspective of Officers and Staff from Anantnag District Administration about Role of Local Urban Government (ULBs) in Implementation of AMRUT Scheme

Ten officers and staff members from Anantnag District Administration, were also approached to receive vital research data and their perspective about role of local urban government (ULBs) in implementation of AMRUT like town planning schemes, particularly in Anantnag Municipal Council of Jammu & Kashmir. These research respondents included Worthy Deputy Commissioner of District Anantnag, Additional

District Development Commissioner of District Anantnag, Assistant Commissioner Revenue, Assistant Commissioner Development (PRI), District Planning Officer, Chief Accounts Officer, Assistant Regional Transport Officer (ARTO), Superintending Engineer of Roads & Buildings (R&B), Superintending Engineer of Public Health Engineering (PHE)/ Jal Shakti, Superintending Engineer of Power Development Department (J&K-PDD) among others. The data were received through personal interview/ unstructured interview method.

These respondents also highlighted the intricate relationship between local urban government institutions (ULBs) and implementation of flagship town planning schemes such as AMRUT, and genesis of creation of these urban development institutions as pillars of growth and progress of cities and towns. In fact, the very basis of ULBs has been holistic and integrated planning of cities and towns, with development of vibrant urban physical infrastructure and provisioning of vital public services to citizens.

They also acknowledged that ULBs in Jammu and Kashmir have been empowered through implementation 74th Constitutional Amendment Act-1992, and subsequent establishment of three tier local self-governance framework in the region with transfer of functional and financial autonomy as well as devolution of institutional authority to these development agencies, that ensured independence of these ULBs to prepare, plan and implement development policies in cities and towns at their own, with overall guidance and supervision by regional administration of Jammu & Kashmir.

The officers from Anantnag District Administration also advocated the role and contribution of Jammu & Kashmir Public Services Guarantee Act-2011 as well as implementation of Right to Information Act in the region, which has prompted public offices to not only deliver time bound basic public services to the citizens but also ensure voluntary disclosure and dissemination of official information in public domain for better public use.

4. Perspective of Members from Anantnag District Development Council (DDC) about Role of Local Urban Government (ULBs) in Implementation of AMRUT Scheme

To receive vital research data for the present research objective, valuable perspectives were also received from five members of Anantnag District Development Council (DDC), about role, responsibilities, authority, functioning and effectiveness of local urban government (ULBs) in facilitating implementation of town planning schemes such as AMRUT, especially in context of Anantnag Municipal Council of Jammu and Kashmir, using personal interview/ unstructured interview technique.

These research respondents also highlighted inter-twined relationship and interdependence between urban local bodies (ULBs) and promotion of town planning through effective implementation of several town planning projects enunciated under AMRUT scheme. They acknowledged that very basic purpose of ULBs, including municipal authorities and town area committees, is to ensure integrated planning and sustainable development of cities and towns, for which both regional administration of Jammu & Kashmir as well as federal regimes have been consistently making efforts to further empower these urban development institutions through devolution of more political, administrative and functional authorities to these institutions.

As mentioned earlier, the members from Anantnag District Development Council, also emphasized the recent constitutional changes in Jammu & Kashmir during abrogation of Article-370 and Article-35A (https://www.indiacode.nic.in), and subsequent Jammu & Kashmir Re-organization Act-2019, whereby Panchayat Raj System of Jammu & Kashmir has been reformed and three-tier PRI mechanism has been established in whole Union Territory of Jammu & Kashmir, with transfer of administrative and functional powers to these PRIs, including regulatory authority over management of several basic public services in respective jurisdictions at village level, block level and district level. Although, under 74th Constitutional Amendment Act-1992, eighteen functions/ services have been enlisted under the purview of Urban Local Bodies (ULBs), the regional administration of Jammu & Kashmir has been augmenting and empowering these institutions with periodic increase in number of public services to be regulated by them.

As such, the role and responsibilities of local urban government/ ULBs in promotion of town planning paradigms, especially for effective implementation of AMRUT like national flagship schemes, are prominent and undeniable, more so in view of emerging challenges of urbanization, global warming and climate changes, and increased global focus towards empowerment of urban planning institutions to ensure sustainable urban development, particularly in ecologically fragile regions such as Jammu & Kashmir.

5. Satisfaction of Research Respondents about Impact of Local Urban Government (ULBs) on Implementation of AMRUT Scheme in Anantnag Municipal Council Area of Jammu & Kashmir

As mentioned in the Chapter-1, the focus areas of AMRUT scheme, are drinking water services, sewerage facilities and septage management, storm water drainage, public transportation, public parks, green spaces and recreational facilities. As such, the level of satisfaction of research respondents, including twenty five ward councillors from selected twenty five municipality wards of Anantnag Municipal Council, ten officers and staff from Anantnag Municipal Council, ten officers and staff from Anantnag District Administration, and five members from Anantnag District Development Council (DDC), about role and impact of local urban government/ ULBs on implementation of AMRUT scheme in Anantnag Municipal Council Area, was measured on a 1-5 Likert scale.

Results as reflected in table-5.6, highlight that most of these research respondents are moderately satisfied regarding impact of Local Urban Government/ ULBs on implementation of AMRUT scheme in Anantnag Municipal Council Area of Jammu & Kashmir.

Table-5.6: Satisfaction of Research Respondents about Impact of Local Urban Government (ULBs) on Implementation of AMRUT scheme in Anantnag Municipal Council Area of Jammu & Kashmir (Scores as per 1-5 Likert Scale)

S. NO	Description of Research Respondents	Number of Respondents	Satisfaction Level of Research Respondents	Remarks
1.	Municipality Ward Councillors	25	**4**	**Satisfied**
2.	Officers and Staff from Anantnag Municipal Council	10	**4**	**Satisfied**
3.	Officers and Staff from Anantnag District Administration	10	**3**	**Partially Satisfied**
4.	Members from Anantnag District Development Council (DDC)	05	**3**	**Partially Satisfied**
Overall Satisfaction (Mean Value-μ)		**50**	**3.50**	**Moderately Satisfied**

Final mean value of **μ**-3.5, reflects that these selected respondents, are moderately satisfied regarding role and impact of Local Urban Government (ULBs)/ Municipalities on implementation of AMRUT scheme in the Anantnag Municipal Council Area of

Jammu and Kashmir. This is due to the fact that according to these research respondents, various services and projects as envisaged under AMRUT scheme for implementation in the region, are either yet to be started or still in progress, and impact of AMRUT scheme as whole is yet to be realized in the district, especially with respect to augmentation of various public services such as proper housing facilities, provisions for better waste management and sanitation, drainage services, development of roads, lanes and pedestrian pathways, development of cycling tracks, adoption of sustainable public transportation facilities such as e-buses, e-rickshaws, cycling etc.

The Anantnag Municipal Council's role in executing the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) scheme has been pivotal yet fraught with challenges. The Council has initiated projects encompassing septage treatment, solid waste management, and the development of green spaces at Khanabal Corridor, Shirpora, and Kadipora. Additionally, plans include constructing a multi-storey parking facility near T.B. Hospital and implementing a water supply scheme for the southern campuses of Kashmir University.

Despite these ambitious undertakings, the Council has encountered significant impediments. Infrastructure projects, particularly roadworks involving the installation of sanitation pipes, have led to thoroughfares being excavated and subsequently neglected, resulting in deteriorated conditions that impede urban mobility and compromise public safety. Moreover, the Council's efforts to enhance urban aesthetics through the creation of green spaces and improved sanitation measures have been hampered by logistical constraints and resource limitations. The envisaged stormwater drainage systems in Mir Danter and Dabruna remain inchoate, exacerbating the municipality's vulnerability to urban flooding.

In summation, while the Anantnag Municipal Council has demonstrated a commitment to advancing urban infrastructure under the AMRUT scheme, the execution has been beleaguered by operational challenges. Addressing these issues necessitates enhanced project management, resource allocation, and stakeholder engagement to actualize the scheme's objectives effectively.

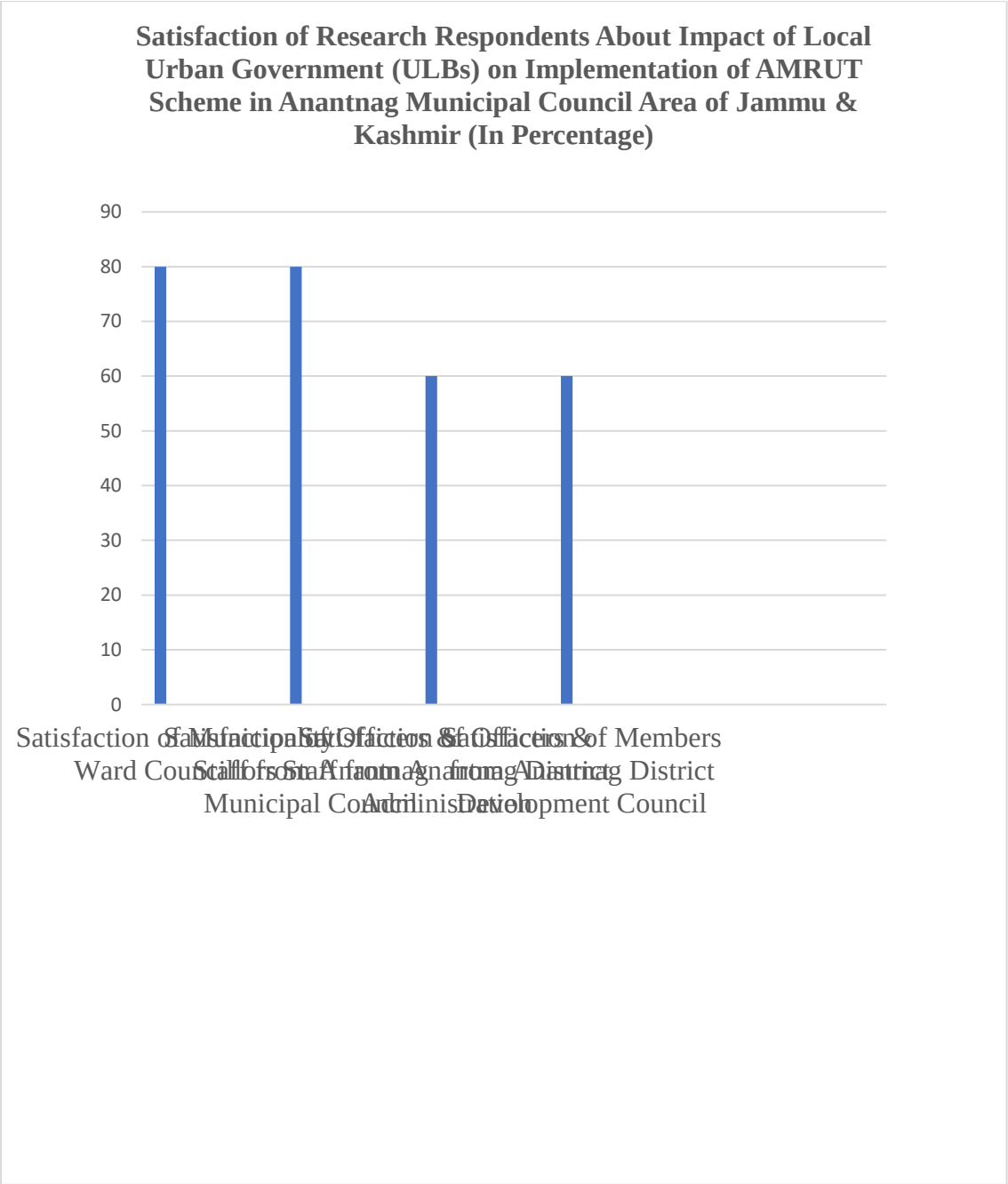


Figure-5.5: Satisfaction of Research Respondents about Impact of Local Urban Government (ULBs) on Implementation of AMRUT scheme in Anantnag Municipal Council Area of Jammu & Kashmir

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CHAPTER-6

FINDINGS AND SUGGESTIONS

Contents in the Present Chapter

6.1 Brief Introduction

The present chapter of this research study aims to consolidate the overall research results and findings of the study, especially in context of the impact of flagship national urban planning scheme of AMRUT in Anantnag Municipal Council Area of Jammu & Kashmir, including its effects on urban transformation in the region, development of basic physical infrastructure such as modernized buildings for hospitals, educational institutions, police stations, fire service stations, development of roads and lanes, drainage services, waste management services, development of public parks and recreational areas, among others.

The chapter also provides detailed description of various challenges of town planning and implementation of AMRUT scheme in Anantnag Municipal Council Area of Jammu & Kashmir region, such as issues of coordination and communication between town planning agencies, issues of garnering public support for development works, issues of financial support and budgetary allocations for town planning projects, challenges of availability of basic physical infrastructure needed for effective implementation of AMRUT like schemes, lack of vibrant IT and digital infrastructure, and most essentially concerns of seeking public opinions and suggestions for town planning to ensure participatory bottom up planning and inclusive development.

Lastly, the chapter also includes some valuable suggestions for rejuvenation of town planning paradigms in Anantnag Municipal Council Area and to facilitate effective implementation of national level town planning initiatives such as AMRUT, thereby bridging the critical development gaps. The chapter also emphasize the critical need for exploring out of the box solutions for pressing development issues, and provides a comprehensive town planning framework in this direction titled- ‘Smart Town Model: A Framework for Promotion of Sustainable Town Planning’, wherein a holistic overview of town planning requirements, has been undertaken and attempts have been made to promote sustainable town planning paradigms through identification of priority areas and administrative gaps, integration of sustainable development goals (SDGs) into town planning process, fund pooling, convergence of development schemes, and subsequent restructuring of town planning policy. The model also

emphasizes development of multiple circular urban clusters in an integrated mechanism, with all such clusters connected through vibrant public transport infrastructure and each cluster dedicated to a particular urban service or trade, such as residential clusters, tourism clusters, IT Business clusters, General Commercial clusters, Heritage and Cultural clusters etc.

6.2 Findings regarding Impact of AMRUT scheme on Town Planning in Anantnag Municipal Council Area of Jammu & Kashmir

As comprehensively explained in previous chapters, the impact and effectiveness of AMRUT scheme on town planning in Anantnag region, have been evaluated and analyzed in multiple dimensions such as- impact on development of basic physical infrastructure such as hospitals, banks, schools, colleges, police stations, fire service stations, proper housing etc, impact on promotion of vital urban services such as drinking water supply, sanitation and waste management, drainage services, facilities for public transportation including development of cycling tracks and pedestrian walkways, and also analysis of impact of the AMRUT scheme on incorporation of sustainability solutions in town planning process such as development of green spaces, public parks, open areas and recreational facilities, use of solar power and battery operated E-buses/ e-rickshaws etc.

These impact assessment perspectives about AMRUT scheme in context of town planning in Anantnag Municipal Council Area, were received from multiple stakeholders, including general public/ citizens residing in twenty-five municipality wards of Anantnag Municipal Council, ward councillors of these twenty-five municipality wards, officers and staff from Anantnag Municipal council, officers and staff from Anantnag District Administration, and members from Anantnag District Development Council (DDC), using simple random sampling/ probability sampling and purposive/ non-probability sampling techniques, as well as structured questionnaires and unstructured interview methods, for data collection.

The valuable insights of these varied stakeholders about impact of AMRUT scheme on town planning in Anantnag Municipal Council region, are consolidated and presented as under-

A. Impact of AMRUT Scheme on Development of Basic Urban Physical Infrastructure in Anantnag Municipal Council Area of Jammu & Kashmir

These selected research respondents, were only partially satisfied regarding impact of AMRUT Scheme on development of basic urban physical infrastructure in the Anantnag Municipal Council area, with overall mean satisfaction value, **μ-2.66** (on 1-5 Likert Scale). This, according to the research respondents, is due to the following facts-

1. The region still lacks uniform distribution of public offices (such as healthcare institutions, schools, police stations, fire service stations etc.), with most of these institutions concentrated in central town region only and insufficient availability of public offices in peripheries of the town.
2. Poor condition of these office buildings with defaced walls, seeping floors, broken window panes, absence of earthquake resilient and flood resistant infrastructure.
3. Lack of vital diagnostic and treatment equipments in hospitals.
4. Insufficient availability of IT and digital infrastructure in public offices.
5. Poor development of roads, lanes and pedestrian pathways.

B. Impact of AMRUT Scheme on Promotion of Vital Urban Services in Anantnag Municipal Council Area of Jammu & Kashmir

The research respondents, including members from general public, ward councillors of twenty-five municipality wards of Anantnag Municipal Council, Officers and staff from Anantnag Municipal Council, officers and staff from Anantnag District Administration, and members from Anantnag District Development Council (DDC), also provided their valuable insights about impact of AMRUT scheme on promotion of vital urban services in the Anantnag region. Their vital data inputs were received using structured questionnaire method and unstructured interview technique. According to results and findings of comprehensive data analysis, these research respondents were also partially satisfied with impact of AMRUT scheme vis a vis its

effectiveness on promotion of vital urban services in Anantnag Municipal Council Area, with overall mean satisfaction value again, **μ-2.66** (on 1-5 Likert Scale). The research respondents were majorly least satisfied with respect to following urban services-

1. Lack of proper housing facilities for urban dwellers, especially poverty-stricken inhabitants living in peripheral areas or slum regions of the town.
2. Poor development of roads and lanes, particularly in interiors of the Anantnag town having roads full of potholes and narrow/ incommutable streets.
3. Absence of public lavatories, especially for women, children and senior citizens, and where ever these exist, they are in dirty and unhygienic state.
4. Insufficient facilities for waste management and sanitation, with lack of segregation of waste at source, inadequate door-to-door collection of household waste, lack of scientific waste-disposal as well as waste recycling technologies.
5. Improper drainage services, with most of the drains in the town either very narrow or damaged, which leads to overflowing of drainage on roads and streets, and subsequent inundation of houses and shops, particularly in rainy seasons.
6. Least availability of public parking lots in the town, forcing people to park their vehicles on roads, leading to traffic congestions and inconvenience for public movement.
7. In adequate use of latest Information and Communication (ICT) technologies for town planning services, such as online delivery of vital basic services, use of digital traffic signals etc.

C. Impact of AMRUT Scheme on Incorporation/ Integration of Sustainability Mechanisms in Town Planning of Anantnag Municipal Council Area of Jammu & Kashmir

As explained comprehensively in previous chapters of this research study, the research respondents, including the citizens residing in twenty-five municipality wards of Anantnag Municipal Council, the ward councillors of these twenty-five municipality wards, officers and staff from Anantnag Municipal Council, officers and staff from Anantnag District Administration, and members from Anantnag District

Development Council (DDC), also provide their valuable perspectives in context of effectiveness of implementation of AMRUT scheme on integration of sustainability solutions in town planning of Anantnag Municipal Council, regarding which they were partially satisfied with overall mean satisfaction value, **μ-2.66** (measured on 1-5 Likert Scale), using comprehensive analysis of data received from these research respondents through structured questionnaires and unstructured interview methods.

The significantly low level of satisfaction of these stakeholders regarding impact of AMRUT scheme on facilitation of sustainable development paradigms in Anantnag Municipal Council Area, was due to following factors-

1. In adequate use of solar energy for residential and commercial purposes, i.e. least use of solar panels to generate electricity in homes, public offices, commercial establishments and at public places such as street lighting and traffic signals etc.
2. Lack of public parks, green spaces, open spaces and recreational areas for general public and especially for children and senior citizens. Such facilities are not developed even at community level, despite the town being home to about half a Million population.
3. Poor development of sustainable public transportation facilities, due to absence of E-buses, insufficient use of E-rickshaws, absence of cycling tracks, and dilapidated pedestrian pathways.
4. Least focus towards cleaning of rivers, streams of natural springs and other vital water bodies, present in the region.
5. Absence of prioritized intervention to decrease alarming air and noise pollution levels in the region.
6. Lack of plantation at public places, especially on roadsides, pedestrian walkways, that could have not only controlled increased levels of air and noise pollution, but also enhanced serenity and aesthetics of the town.

6.3 Findings regarding Challenges of Town Planning and Implementation of AMRUT Scheme in Anantnag Municipal Council Area of Jammu & Kashmir

The research respondents highlighted several challenges of town planning and issues of implementation of AMRUT scheme in Anantnag Municipal Council Area of Jammu & Kashmir, as presented below-

1. The first and foremost challenges of town planning in Anantnag Municipal Council, as per research respondents, have been lack of integrated planning approach and poor departmental coordination.
2. Poor development of basic physical infrastructure in the town (as highlighted in above sections), especially infrastructure in public offices that are directly involved in town planning process and implementation of town planning schemes such as AMRUT scheme.
3. Absence of planning for development of earthquake resilient public infrastructure. It is critical area of concern for town planning process in the region due to the fact that whole Jammu & Kashmir region comes under zone-v of seismic scale which makes it extremely vulnerable to earthquakes. It is pertinent to mention here that the region witnessed several earthquakes in recent past of varying intensity, that caused significant loss of human lives and public property. As per a recent study by Jane Palmer and Kristin Bjornsen, Jammu & Kashmir region is at brink of a mega earthquake of expected intensity of 9 on Richter scale anytime soon, which mandates urgent attention towards development of earthquake resilient public infrastructure in whole region of Jammu & Kashmir, including the Anantnag Municipal Council Area (https://cires1.colorado.edu).
4. Poor development of flood resistant public infrastructure. It is also essential in view of the region being prone to flash floods and deluges, as witnessed during unprecedented 2014 floods, wherein half of the Anantnag Town got submerged under flood waters for several weeks and led to immense loss of public lives and damage to public property. The 2014 floods affected 1.595 lac population and 1.53 lac acres of public land in Anantnag district (Ishfaq Hussain Malik, 2022).

5. Least adoption of latest technology interventions for town planning process, such as ICT enabled timely delivery of online public services, technology driven architecture assessment in the town and subsequent town planning formulation.
6. Deficient healthcare services in public hospitals, due to lack of vital diagnostic and treatment equipments, which leads to immense public suffering and frequent referrals of patients to tertiary care hospitals in capital city Srinagar.
7. Poor development of roads, lanes, pedestrian walkways and cycling tracks in the town, due to which most of the roads and lanes, especially in interior areas of the town, are very narrow and filled with potholes. No efforts have been put for effective road widening in the town, resulting in frequent traffic jams and hardships for pedestrians. Although, the district administration has developed an alternate bypass road from Mahandi Kadal to Janglat Mandi area of the town, to ease out some traffic from central Lal chowk road, most of the people still prefer to drive along central Lal chowk road only due to presence of public markets and commercial establishments. As such, this vital road link across the Anantnag Town needs urgent widening, more so due to the fact that it provides connectivity towards only tertiary care hospital of the region-Government Medical College & Hospital Anantnag presently located at Janglat Mandi and other district level offices.
8. Poor planning of public housing facilities in the town, particularly, for poor population residing in slums and peripheral areas of the town.
9. Deficiency of public lavatories in the town, making immense inconvenience particularly for women, children and senior citizens.
10. Insufficient availability of waste management and sanitation services in the town, with lack of segregation of waste at source, inadequate door-to-door waste collection facilities, and least focus under town planning given towards scientific disposal and recycling of urban waste.
11. Improper drainage services, with most of the drains in the town either very narrow or damaged, which leads to overflowing of drainage on roads and streets, and subsequent inundation of houses and shops, particularly in rainy seasons.

12. Least availability of public parking lots in the town, forcing people to park their vehicles on roads, leading to traffic congestions and inconvenience for public movement.
13. In adequate use of latest Information and Communication (ICT) technologies for town planning services, such as online delivery of vital basic services, use of digital traffic signals etc.
14. In adequate use of solar energy for residential and commercial purposes, i.e. least use of solar panels to generate electricity in homes, public offices, commercial establishments and at public places such as street lighting and traffic signals etc.
15. Lack of public parks, green spaces, open spaces and recreational areas for general public and especially for children and senior citizens. Such facilities are not developed even at community level, despite the town being home to about half a Million population.
16. Poor development of sustainable public transportation facilities, due to absence of E-buses, insufficient use of E-rickshaws, absence of cycling tracks, and dilapidated pedestrian pathways.
17. Least focus towards cleaning of rivers, streams of natural springs and other vital water bodies, present in the region.
18. Absence of prioritized intervention to decrease alarming air and noise pollution levels in the region.
19. Lack of plantation at public places, especially on roadsides, pedestrian walkways, that could have not only controlled increased levels of air and noise pollution, but also enhanced serenity and aesthetics of the town.
20. Inadequate interventions taken for increasing public awareness regarding town planning and development schemes, as also to seek optimum public support for these development projects, thereby missing a vital component of town planning process i.e. participatory planning and bottom-up approach of development.

6.4 Corroboration of Research Findings with Review of Literature

The Atal Mission for Rejuvenation and Urban Transformation (AMRUT) represents a paradigmatic shift in India's urban development trajectory, embodying the quintessential characteristics of decentralized governance and sustainable urban planning. This comprehensive analysis correlates the extant literature on urban planning discourse with empirical findings from Anantnag Municipal Council, Jammu and Kashmir, elucidating the multifaceted implications of flagship urban development initiatives on local governance structures and community empowerment mechanisms.

The convergence of theoretical frameworks articulated by contemporary scholars and the pragmatic realities observed in Anantnag Municipal Council reveals a complex tapestry of implementation challenges, institutional coordination deficiencies, and participatory planning limitations that characterize the contemporary urban development landscape in conflict-affected regions.

1. Institutional Framework Alignment

The theoretical postulations advanced by Simon et al. (2021) regarding the devolution of optimum authority to local governance institutions find profound resonance in the empirical findings from Anantnag Municipal Council. The research objective-V findings substantiate Simon's theoretical framework by highlighting the establishment of a comprehensive three-tier Panchayat Raj System in Jammu & Kashmir, representing a quintessential manifestation of administrative delegation and political decentralization.

However, the empirical evidence reveals a discordant reality wherein respondents demonstrate only moderate satisfaction regarding the Urban Local Bodies' (ULBs) role in AMRUT implementation. This dichotomy illuminates the theoretical-practical chasm that characterizes contemporary urban governance structures, wherein constitutional provisions for institutional empowerment fail to translate into tangible developmental outcomes. The 74th Constitutional Amendment Act-1992, as acknowledged in the literature by Anitha, Ramesan, and Parisicha (2019), provides

the constitutional scaffolding for ULB empowerment. The Anantnag findings corroborate this theoretical framework while simultaneously revealing the temporal lag in implementation, particularly noting that these provisions were operationalized in Jammu & Kashmir only post-Article 370 abrogation in 2019.

2. Participatory Planning and Community Engagement

The scholarly investigations by Geekiyanage et al. (2020) identifying forty-eight challenges in community engagement find stark empirical validation in the Anantnag context. The research findings reveal "lack of public awareness about urban planning and welfare programs" as a critical impediment, directly corroborating Geekiyanage's identification of inadequate community awareness as a prominent constraint.

The absence of purposeful community engagement mechanisms identified in the literature manifests empirically in Anantnag through diminished prospects for participatory development and consequent poor public support for developmental schemes. This convergence underscores the universal nature of community participation challenges transcending geographical and cultural boundaries.

Roy's (2023) advocacy for participatory planning approaches through his Barddhaman Municipality case study provides a contrasting paradigm to the Anantnag experience. While Roy demonstrates successful integration of political decentralization and participatory methodologies, the Anantnag findings reveal persistent challenges in actualizing meaningful community involvement in urban planning processes.

3. Implementation Challenges and Coordination Dynamics

The coordination challenges articulated by Cretu et al. (2021) regarding urban development project execution find comprehensive empirical substantiation in the Anantnag findings. The research identifies "deficient administrative coordination between public agencies operating in Anantnag Municipal Council region" as a critical implementation challenge, directly corroborating Cretu's emphasis on proactive institutional coordination necessities.

The specific infrastructure deficiencies identified in Anantnag—including inadequate drainage infrastructure, poor waste management, and deficient public transportation services—exemplify the coordination challenges that Cretu's research theoretically predicts. These empirical findings validate the scholarly assertion that successful urban development programs require robust inter-agency coordination mechanisms.

4. Capacity Building and Institutional Strengthening

Kundu and Pande's (2021) identification of capacity building deficiencies in human resources and governance institutions resonates profoundly with the Anantnag empirical evidence. The research findings reveal multiple institutional capacity limitations, including insufficient focus on sustainable development paradigms and inadequate adoption of ICT tools for smart urban management systems.

The literature's emphasis on enhancing functional and financial autonomy for ULBs finds empirical validation in the moderate satisfaction levels regarding local urban government effectiveness in AMRUT implementation. This correlation suggests that despite constitutional provisions for ULB empowerment, practical autonomy remains circumscribed, limiting institutional effectiveness in developmental program implementation.

5. SDGs Integration & SDG-11 Implementation Challenges

The scholarly discourse by Biswas and Mhetre (2020) regarding SDG-11 integration in urban planning finds nuanced empirical correlation in the Anantnag findings. Research objective-IV reveals that respondents demonstrate only partial satisfaction regarding AMRUT scheme effectiveness in implementing sustainable development mechanisms targeted under SDG-11.

The specific sustainability deficiencies identified in Anantnag, including inadequate development of public parks, green spaces, and recreational areas, limited implementation of sustainable development paradigms such as rainwater storage and solar energy utilization, and insufficient development of pedestrian walkways and

cycle tracks, directly validate Biswas and Mhetre's concerns regarding SDG-11 target achievement disparities.

6. Environmental Sustainability Imperatives

Chowdhary's (2018) identification of haphazard urbanization patterns in Jammu & Kashmir without adequate environmental conservation focus finds empirical corroboration in the Anantnag study. The research findings reveal insufficient incorporation of sustainable development paradigms, including limited use of rooftop solar panels, inadequate development of cycling tracks, and poor adoption of sustainable public mobility solutions.

This convergence underscores the persistent challenges in integrating environmental sustainability considerations into urban planning processes, particularly in regions facing complex governance challenges and resource constraints.

7. Regional Context, Topography and Environmental Challenges

The Anantnag research findings regarding Jammu & Kashmir's "unique topography, hilly terrain, immense seismic vulnerability and volatile political environment" provide crucial contextual dimensions that amplify the theoretical challenges identified in the literature. Malik, Bhat, and Najar's (2016) research on water resource management in the Lidder catchment area using GIS technologies assumes particular relevance given Anantnag's geographical proximity and similar environmental challenges.

The empirical findings reveal that despite AMRUT implementation, fundamental infrastructure development challenges persist, including inadequate drainage infrastructure and poor waste management systems. These challenges assume heightened significance in the context of the region's seismic vulnerability and environmental sensitivity, as highlighted in the broader literature on Jammu & Kashmir's urban development challenges.

8. Political Context and Governance Dynamics

The research findings acknowledge the "volatile political environment" as a significant factor affecting development initiative implementation. This empirical observation correlates with Stojanovic et al.'s (2016) advocacy for contextualized governance approaches that accommodate local specificities and cultural nuances rather than universalized models.

The temporal dimension of institutional reform implementation in Jammu & Kashmir, particularly the post-2019 operationalization of constitutional provisions, provides a unique case study validating Stojanovic's theoretical framework regarding the necessity for tailored governance approaches.

9. Service Delivery and Public Satisfaction Metrics

The empirical findings reveal comprehensive dissatisfaction regarding AMRUT's impact on basic urban infrastructure development and public service quality improvement. This finding directly correlates with Singh et al.'s (2021) examination of AMRUT scheme implementation in Jammu & Kashmir, which advocated for the scheme's potential in developing resilient physical infrastructure and facilitating impactful public services.

The disconnect between theoretical potential and empirical reality in Anantnag suggests that while AMRUT's conceptual framework aligns with scholarly recommendations for infrastructure development and public service enhancement, implementation challenges significantly constrain actual outcomes.

10. Citizen Empowerment and Satisfaction Metrics

The research findings indicating that "majority of citizens/residents of Anantnag Municipal Council Area are either strongly unsatisfied, unsatisfied or partially satisfied" regarding AMRUT's developmental impact provide crucial empirical data for evaluating the scheme's effectiveness. This finding correlates with the broader

literature's emphasis on citizen empowerment as a critical outcome metric for urban development initiatives.

Bhagat's (2019) identification of inadequate authority devolution to ULBs and insufficient technical, financial, and human resource support finds empirical validation in the Anantnag citizen satisfaction metrics, suggesting that institutional capacity limitations directly impact public service delivery quality and citizen satisfaction levels.

11. Technology Integration, Digital Governance and Smart Urban Solutions

Kundu and Pande's (2021) advocacy for modern ICT interventions to optimize urban planning processes finds limited empirical realization in the Anantnag context. The research findings identify "lack of adoption of ICT tools for smart traffic management systems" as a critical deficiency, highlighting the gap between theoretical recommendations and practical implementation.

This technology adoption deficit assumes particular significance given the literature's emphasis on technology-enabled public service platforms as essential components of contemporary urban governance frameworks. The Anantnag findings suggest that despite policy rhetoric regarding smart city initiatives, ground-level technology integration remains inadequate.

12. Sustainable Technology Implementation

The empirical findings reveal insufficient focus on sustainable technology adoption, including limited use of rooftop solar panels, inadequate E-bus and E-rickshaw deployment, and poor development of cycling infrastructure. These deficiencies directly contradict the theoretical frameworks advocated in the literature regarding sustainable development integration in urban planning processes.

13. Financial Resources and Investment Mobilization

Chowdhary and Kumari's (2019) theoretical framework regarding the correlation between institutional reforms and private investment attraction finds limited empirical validation in the Anantnag context. The research findings suggest that despite constitutional reforms and ULB empowerment initiatives, the translation of these institutional changes into enhanced financing opportunities and private sector engagement remains constrained.

This limitation correlates with the broader implementation challenges identified in the research, suggesting that institutional capacity building and administrative coordination improvements are prerequisites for effective private sector engagement in urban development financing.

14. Fiscal Resource Utilization

The literature's emphasis on efficient utilization of local fiscal resources through optimized devolution mechanisms finds mixed empirical support in the Anantnag findings. While the research acknowledges governmental contributions toward ULB empowerment, the moderate satisfaction levels regarding local urban government effectiveness suggest that financial autonomy and resource utilization efficiency remain suboptimal.

15. Comparative Analysis, Regional Variations and Best Practices

The Anantnag empirical findings provide valuable comparative insights when juxtaposed with other regional case studies referenced in the literature. Roy's (2023) Barddhaman Municipality case study, which demonstrates successful infrastructure development and public service delivery through integrated approaches, offers a contrasting paradigm to the Anantnag experience.

This comparative analysis suggests that successful AMRUT implementation requires not merely policy framework adherence but comprehensive institutional coordination,

robust community engagement, and sustained capacity building initiatives tailored to local contexts and challenges.

16. Lessons from International Experiences

Simon et al.'s (2021) comparative analysis of South African and Indian cities provides international perspective on the challenges observed in Anantnag. The universal nature of urban planning challenges- including institutional coordination deficiencies, community engagement limitations, and sustainable development integration difficulties- suggests that the Anantnag experience reflects broader global patterns rather than region-specific anomalies.

17. Recommendations and Strategic Interventions

A. Institutional Capacity Enhancement

The convergence of literature and empirical findings suggests that enhanced institutional capacity building represents a critical intervention priority. This includes strengthening administrative coordination mechanisms, improving technical competencies, and fostering inter-agency collaboration frameworks that can effectively navigate the complex implementation landscape.

B. Community Engagement Strengthening

The literature's emphasis on participatory planning and the empirical evidence of community engagement deficiencies suggest that systematic community involvement mechanisms require urgent attention. This includes developing purposeful engagement platforms, enhancing public awareness regarding urban planning initiatives, and creating feedback mechanisms that ensure citizen voices influence planning decisions.

C. Sustainable Development Integration

The partial satisfaction regarding SDG-11 implementation suggests that sustainable development integration requires more systematic attention. This includes developing

comprehensive sustainability frameworks, implementing green technology solutions, and ensuring that urban planning processes prioritize environmental conservation alongside development objectives.

Conclusion

The correlation between contemporary urban planning literature and the empirical findings from Anantnag Municipal Council reveals a complex landscape of theoretical aspirations and practical limitations. While the AMRUT Mission embodies progressive principles of decentralized governance, sustainable development, and community empowerment, its implementation in Anantnag faces multifaceted challenges that reflect broader global patterns identified in scholarly discourse.

The analysis demonstrates that successful urban transformation requires not merely policy framework deployment but comprehensive institutional strengthening, systematic community engagement, robust administrative coordination, and sustained commitment to sustainable development principles. The Anantnag experience provides valuable empirical insights that both validate theoretical frameworks and highlight implementation challenges that require innovative solutions tailored to local contexts and constraints.

Future research and policy interventions should focus on developing adaptive governance frameworks that can effectively bridge the theory-practice divide while ensuring that urban development initiatives genuinely contribute to citizen empowerment, environmental sustainability, and social inclusivity in the complex landscape of contemporary urban planning challenges.

6.5 Suggestions for Promotion of Sustainable Town Planning and Implementation of Urban Development Schemes in Anantnag Municipal Council Area of Jammu & Kashmir

Vital perspectives and suggestions were also sought from the research respondents, including all the stakeholders as mentioned in previous sections of this chapter, about policy reforms and administrative interventions needed for promotion of sustainable town planning mechanisms and rejuvenation of implementation frameworks for effective implementation of urban development schemes in Anantnag Municipal Council Area of Jammu & Kashmir. These valuable perspectives from various stakeholders along with our own policy suggestions, are presented below-

A. Suggestions for Short Term Interventions in Town Planning Paradigms

These suggestions include the administrative interventions that can be taken in short term period in the initial phase of town planning re-orientation process, to develop basic framework for implementation of medium-term interventions and long-term town planning interventions, as well as facilitate timely delivery of selected basic urban services to citizens in which immediate reforms are possible during short term intervention period. Some of these short-term suggestions for effective town planning and implementation of urban development schemes, are-

1. Identification of priority areas and development gaps, that need urgent policy interventions.
2. Using pooling of funds available under different development projects, effective facelift of public offices needs to be undertaken on priority, including procurement of necessary office infrastructure and IT machinery.
3. Rationalization of manpower across different development and town planning departments, using human resource auditing, so as to infuse new blood into administrative working pattern with placement of right men at right place.
4. Adopt optimum use of digital technologies to facilitate real time online communication between heads of different departments, on daily basis or atleast

on alternate days, to ensure effective inter-departmental coordination and operational synergy.

5. Using manpower from urban local bodies (ULBs), teaching community from educational institutions and members from civil society organizations, government/ the district administration needs to organize public awareness campaigns, road shows, seminars/ debates/ quiz competitions in educational institutions, and promotion of government development schemes/ town planning projects through digital media as well, to create optimum public awareness as well as garner much needed public cooperation for implementation of town planning programmes. It will ensure both participatory planning as well as localized development through bottom-up development approach giving importance to inputs from local public representatives.
6. Incentivization of waste management process, wherein households will be encouraged to segregate the waste at source and properly dispose it off through separate bins as solid biodegradable waste, solid non-biodegradable waste, liquid waste, hazardous and non-hazardous waste etc.
7. Using available manpower from different allied departments as well as volunteers from general public and civil society organizations, for periodic cleaning of water bodies and their constant supervision.

B. Suggestions for Medium Term Interventions in Town Planning Paradigms

These suggestions include the administrative interventions that need specific planning and fund allocation, and as such need administrative approval from higher authorities. These steps are aimed at promotion of basic public services such as provisions for housing facility for all, modernization of educational institutions incorporating vibrant digital infrastructure and innovation labs, development of hospitals with procurement of necessary diagnostic and treatment equipments, development of roads and lanes etc. Another vital dimension of medium-term interventions of town planning process, is integration of sustainable development goals (SDGs) with town planning paradigms, to ensure sustainable town planning.

Some of these medium-term town planning suggestions include-

1. Creation of a core administrative group/ team to study sustainable development initiatives of developed nations/ states, and develop a framework for integration of sustainable development goals (SDGs) with town planning perspectives, to facilitate action plan for implementation of each sustainable development goal (SDG) under town planning process.
2. Under the overall guidance and supervision of this core team, divide various basic public services among town planning departments, to facilitate departmental responsibility to achieve development targets of specific public service and ensure effective supervision of the core administrative team.
3. Under such mechanism, development plans for specific public services are to be sought from respective departments with requirement of fund allocations, and same are to be again cross-checked by the core group, for their feasibility and alignment with SDGs, before integrating them into a single developmental town plan to be forwarded to higher authorities for approval, and subsequently, same development plan needs to be implemented as medium term intervention of town planning.
4. Various public services that can be augmented such under medium-term intervention are- development of proper housing facilities for all, particularly for poor population living in slums and peripheral areas of the town, facilitate upgradation of educational institutions through procurement of student friendly infrastructure and digital technologies, development of public healthcare services through procurement of vital diagnostic and treatment machinery in public hospitals, development/ macadamisation of roads and lanes, development of basic waste management facilities and drainage services, among others.

C. Suggestions for Long Term Interventions in Town Planning Paradigms

These suggestions include perspectives and plan of action for achieving long-term sustainable town planning targets, and need overall restructuring of town planning policies as well as urban development schemes, for which cohesiveness of ideas,

effective coordination and operational synergy is much needed between district administration, regional administration and central/ federal government, under cooperative federalism approach. These suggestions are aimed at development of long-term town planning policies in line with sustainable development goals, and include-

1. Holistic review of town planning paradigms in context of local area-based needs, and restructuring of overall town planning policy framework, to achieve targets of sustainable development.
2. The various town planning initiatives and basic public services, which can be considered under this long-term intervention mechanism, include- widening of roads and lanes, development of pedestrian pathways and cycle tracks, upgradation of green spaces, public parks, open spaces and recreational areas, especially for children and senior citizens of urban population, adaptation of scientific technologies for waste disposal and waste recycling, widespread use of solar power instead of conventional electricity in homes, public offices and commercial establishments, incorporation of digital technologies for traffic management, procurement of E-buses and E-rickshaws, increasing plantation across the town etc.
3. These services have been deliberately kept under long-term intervention part, because these need comparatively large fund allocation and as such policy focus at regional administration level as well as consistent guidance and support from union government.

6.6 Smart Town Model: A Framework for Promotion of Sustainable Town Planning

As one of the vital outcomes of the present research study, an alternate town planning framework is proposed for better town planning as per emerging challenges of present times, particularly with respect to concerns of global warming and climate change. The town planning model titled- 'Smart Town Model: A Framework for Promotion of Sustainable Town Planning', aims at mitigating the present era urban development challenges, in terms of development of vital urban infrastructure in modern towns, facilitation of basic public services to the public, and integration of ecofriendly and sustainability mechanisms in town planning process.

1. Description of the Proposed Smart Town Model

The proposed model presents an alternative administrative framework for developing smart towns by emphasizing sustainable urban planning methods, integrating Sustainable Development Goals (SDGs) into urban planning processes, realigning policies, pooling funds, coordinating town planning schemes, ensuring effective administrative collaboration, adopting a bottom-up planning approach, and fostering robust public-private partnerships, to ensure effective and sustainable town planning paradigm.

Additionally, the proposed model also advocates for regular policy analysis, evaluation, and continuous real-time public feedback mechanisms, utilizing innovative ICT and artificial intelligence (AI) technologies. The model aims to promote technologies for scientific waste disposal and waste recycling, use of solar power networks, establish specific circular urban clusters as business hubs, heritage sites, tourist circuits, educational centres, food clusters, and water parks, all interconnected through Integrated E-Transport services. Each cluster would be governed by a respective ward councillor, with legal-rational administrative and financial autonomy within their jurisdiction. Overall, all town clusters would be supervised collectively by their respective Urban Local Bodies (ULBs) or Town Planning Committees or Core Administrative Groups of respective districts.

2. Steps of the Proposed Smart Town Model

The implementation process for the proposed smart town model involves following steps-

I. Impact Analysis of the present town planning process

II. Identification of challenges and barriers in town planning

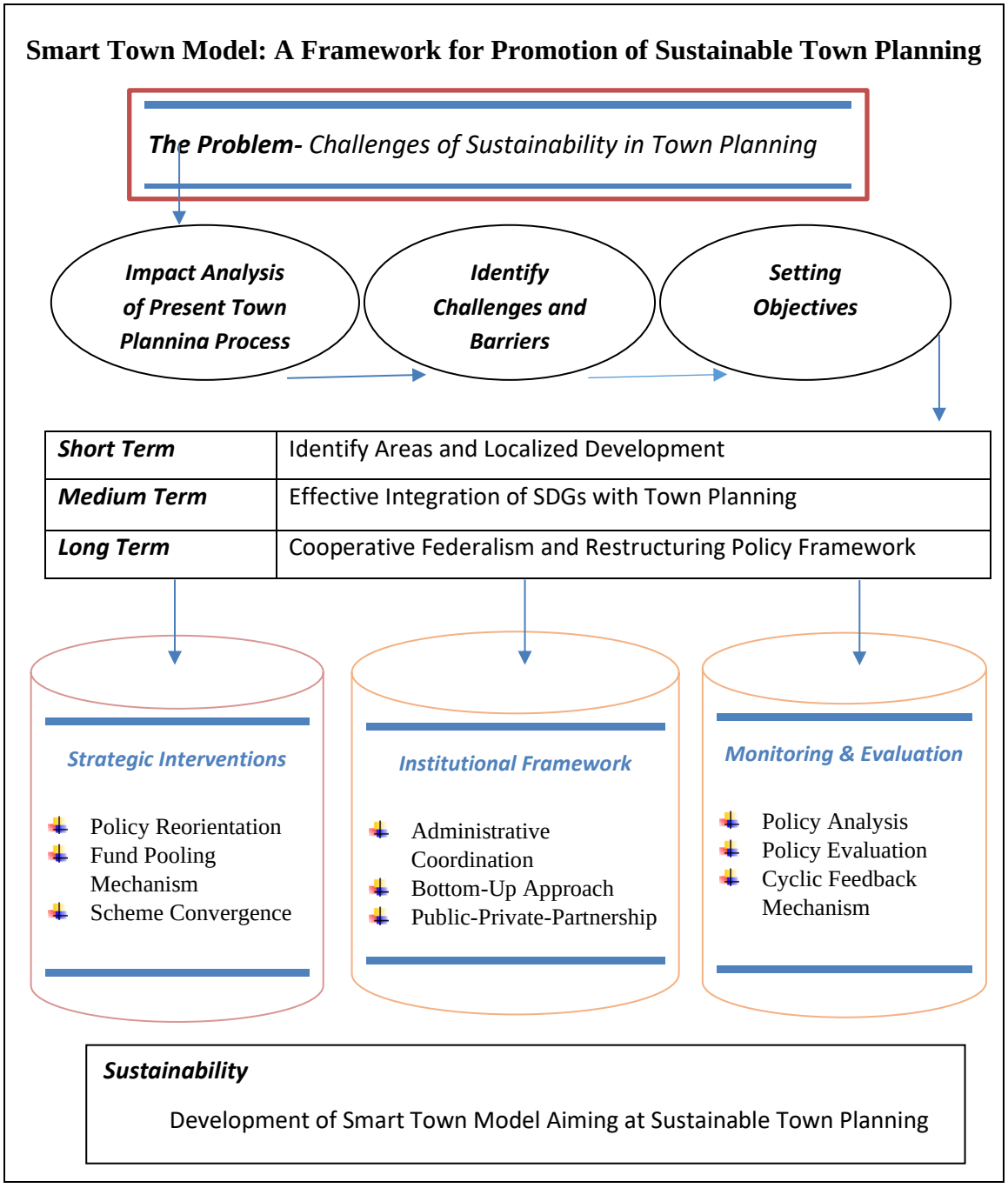
III. Setting short-term objectives, involving identifying priority areas and ensuring localized development through local fund pooling

IV. Setting medium term objectives, involving effective integration of sustainable development goals (SDGs) with town planning process

V. Setting long term objectives, involving restructuring policy framework and administrative coordination between district administration, regional administration and federal government under cooperative federalism

These short-term, medium-term and long-term objectives proposed under the Smart Town Model, are comprehensively explained in earlier sections of this chapter of the study.

3. Flow Chart of the Proposed Smart Town Model



4. Significance and Scope of the Proposed Smart Town Model

The proposed Smart Town Model has immense scope for promotion of ecofriendly and sustainable town planning paradigms in all forms of democratic/ government set ups. The model provides a detailed step-wise implementation framework for its effective adaptation, with achievable targets in short-term, medium-term and long-

term timelines. Some of the scintillating features of this proposed town model, have been its adaptability in diverse geopolitical and socio-economic conditions, and its flexibility in realization of town planning and sustainability targets in phased manner.

Another salient feature of this developmental model, is the comprehensive integration of town planning paradigms with targets under sustainable development goals (SDGs) framework, and subsequent formulation of vibrant roadmap for collective fulfilment of these targets as enunciated under different town planning policies along with targets under SDGs.

The proposed model has wider scope in both knowledge and practices of public administration, urban development, sustainable development, town planning and governance domains, as it provides new insights about these conceptualizations and adds their knowledge base, as well as provides comprehensive town planning framework to aid administrative thinkers, scholars, development practitioners, town planners and policy makers, for future town planning as well as incorporation of ecofriendly and sustainable development strategies in town planning processes.

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CONCLUSION

This research study aimed at analysis of town planning processes in Jammu & Kashmir region, with special reference to effectiveness of town planning paradigms in Anantnag Municipal Council Area of Jammu & Kashmir. The broader focus areas of this research study also include evaluation of flagship national urban planning scheme- AMRUT, in terms of its effectiveness on urban transformation, its impact on town planning mechanisms in Jammu & Kashmir region in general and in context of town planning of Anantnag Municipal Council Area in particular. The research study also focused on highlighting emerging challenges of town planning in the region as well as concerns and issues of implementation of urban planning schemes, such as AMRUT in Anantnag Municipal Council Area.

The present study also highlights comprehensively the role, responsibilities, authorities, powers, functions and effectiveness of local urban government/ urban local bodies, including municipalities and town area committees, in implementation of AMRUT like town planning schemes in their jurisdiction. To this end, the study analyses the functioning of urban local bodies/ local government institutions in Jammu & Kashmir, particularly the functioning of Anantnag Municipal Council, and their impact on town planning processes and facilitation of basic public services to urban residents.

Lastly, as one of the vital outcomes of the present study, an alternate town planning model is proposed to revolutionize and rejuvenate town planning paradigms. The model titled- 'Smart Town Model: A Framework for Promotion of Sustainable Town Planning' is the first ever town planning model that provides comprehensive integration of all sustainable development goals (SDGs) into town planning processes, and provides a detailed roadmap and step-wise procedure for achievement of these specified targets under short-term interventions (immediate possible interventions, including

identification of priority areas and localized development), medium-term interventions (mid-level interventions needing specific town planning reforms, integration of SDGs into town planning and administrative approval from higher authorities) and long-term interventions (overall restructuring of town policy frameworks and consistent coordination as well as operational synergy between different levels of government/ administration under cooperative federalism framework).

The present research study focused on analysis of town planning and implementation of AMRUT scheme in Anantnag Municipal Council Area of Jammu & Kashmir, due to multiple reasons, including-the historical and cultural importance of the Anantnag town, being the oldest town of south Kashmir region, rich in religious and cultural heritage sites, the central location of the Anantnag town, having connectivity on all sides towards socio-economically and historically important locations such as Pahalgam tourist resort, Shri Amarnath Cave, Kokernag tourist resort, Verinag spring, Achabal garden, Daksum, Sinthantop, Aharbal, Martand temple of Mattan, several sufi shrines, among others. The region is also famous worldwide for its green lush forests, snowy peaks, fresh water alpine lakes and unique flora/ fauna, thus attracting thousands of local and foreign tourists every year.

Anantnag is the only district after capital cities of Srinagar and Jammu, selected for urban transformation under AMRUT scheme, and several development projects have been implemented under the mission in Anantnag town till date, under the supervision of Anantnag Municipal Council, Anantnag District Administration and Anantnag District Development Council (DDC). As such, the present research study aimed to undertake comprehensive analysis of town planning needs of the Anantnag town, present challenges of town planning and development concerns in the area, impact and effectiveness of the AMRUT scheme in facilitating sustainable town planning in the region.

These research objectives of the present study were realized through significant collection of data from various stakeholders, data through use of Right to Information/ RTI Act and using a large set of secondary data sources, followed by exquisite conclusive data analysis, to reveal results and findings of the study. The primary research data were received from two hundred fifty members from general public

residing in twenty-five municipality wards of the Anantnag Municipal Council, using simple random sampling technique and structured questionnaires. Also, the primary data were received from twenty-five ward councillors of these selected twenty-five municipality wards of the Anantnag Municipal Council, using purposive/ non probability sampling method and unstructured interview technique.

The research data were also received from ten officers and staff from Anantnag Municipal Council, ten officers and staff from Anantnag District Administration, and five members from Anantnag District Development Council (DDC), using purposive/ non-probability sampling method and unstructured interview technique. The data about various town planning schemes and projects implemented under AMRUT mission in Jammu & Kashmir and in Anantnag Municipal Council Area, were received from concerned departments at district level and regional level, using RTI applications. Also, a comprehensive literature survey has been undertaken to illicit valuable information and vital research data for the present research study, including secondary data sources such as published research papers, books, government publications and reports, institutional reports from global bodies, websites and archives, and newspapers.

The collected research data and subsequent data analysis focused on evaluation of public awareness about these town planning processes, public satisfaction about impact of AMRUT scheme on town planning and facilitation of basic vital services, and public perspectives about challenges of town planning and implementation of AMRUT scheme in Anantnag Municipal Council Area of Jammu & Kashmir. The comprehensive analysis of the received data, reveals that the research respondents in general, are partially satisfied with public awareness about town planning processes in Anantnag Municipal Council Area of Jammu & Kashmir, as well as partially satisfied with impact of AMRUT scheme on promotion of town planning mechanisms in the Anantnag Municipal Council region.

The research respondents also highlighted several key challenges of town planning and implementation of AMRUT scheme in the Anantnag Municipal Council Area of Jammu & Kashmir, such as issues of departmental coordination and operational synergy, lack of earthquake resilient and flood resistant physical infrastructure, dilapidated condition of several public offices, lack of integrated ICT and digital technologies mechanism for effective town planning, poor delivery of vital urban

services, as well as lack of ecofriendly and sustainability solutions in town planning such as development of public parks, green spaces, recreational areas, use of solar energy and e-public transport, development of pedestrian walkways and cycling tracks, etc.

These key development challenges along with policy suggestions for mitigation of these challenges, are presented in chapter-4 and chapter-5 of the present study, along with aforementioned town planning model as an alternate framework for rejuvenation of town planning paradigms, to ensure sustainable town planning in the region.

Scope of the Present Study

The scope of the research study lies in understanding town planning perspectives, including impact of town planning frameworks and urban planning schemes such as AMRUT on transformation of development paradigms in towns, as well as evaluation of challenges of town planning and implementation concerns of AMRUT scheme in Anantnag Municipal Council Area of Jammu & Kashmir, providing valuable inputs about effectiveness of town planning initiatives, highlighting the role, responsibilities, functioning and effectiveness of local urban government/ urban local bodies in town planning, as well as facilitating vital developmental suggestions to aid the regional policy makers and town planners to ensure optimum and sustainable town planning in the region.

This is also accomplished through development of an alternate town planning model-titled ‘Smart Town Model: A Framework for Promotion of Sustainable Town Planning’, which has received IPR/Copyright registration from Government of India, and possess immense significance in both knowledge and practice of town planning, with immense scope for promotion of sustainability in town planning processes through vibrant implementation mechanism, as well as increasing the knowledge base about urban development, town planning, sustainable development, Public Administration and governance, by enabling new insights into town planning and sustainable development fields of knowledge.

Scope for Future Research Studies

1. To limit sample size for timely research completion and detailed statistical analysis, the study area is limited to Anantnag Municipal Council Area of Jammu & Kashmir only. Hence, further studies are suggested to evaluate town planning paradigms in other regions of Jammu & Kashmir to develop a holistic sustainable town planning approach.

2. Also, as recommended by Research Advisory Committee/ RDC panel, major focus of the present research study has been towards analysis of impact and implementation challenges of AMRUT scheme in context of town planning in Jammu & Kashmir, especially in Anantnag Municipal Council. As such, more analytical research studies are needed to evaluate effectiveness, challenges and impact of other major town planning schemes, as formulated by regional administration and central government.

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Index-1st

Sample of Questionnaire used in The Present Study

QUESTIONNAIRE FOR GENERAL PUBLIC

STUDY TITLE- IMPACT OF AMRUT SCHEME IN JAMMU AND KASHMIR: A STUDY OF ANANTNAG MUNICIPAL COUNCIL AREA

Dear Respondent,

As part of my research work for the award of PhD degree in Public Administration from Lovely Professional University Punjab, the present study is being conducted to understand the interlinkage between sustainable development and town planning, examine working of AMRUT scheme in Jammu and Kashmir, assess impact of AMRUT scheme on town planning in Anantnag Municipal Council Area, analyze the efficacy of AMRUT scheme in dealing with the challenge of realizing the Sustainable Development Goal-11 (SDG-11) in Anantnag Municipal Council Area of Jammu & Kashmir, and evaluate the role of local urban government in implementation of AMRUT Scheme.

I humbly request your esteemed-self to kindly spare few minutes to fill the questionnaire & provide your valuable insights, for which I shall be indebted and immensely grateful. I assure and certify confidentiality of your personal details and feedback.

Thanks and Best Regards

Yours sincerely

Rubaya Akther

Ph.D. Research Scholar

Public Administration

Lovely Professional University, Punjab

R/O: Devalgam Kokernag

Contact No. 7006969870// 7780915865

Email. rubayagull9@gmail.com

QUESTIONNAIRE

A) Demographics

1) Name _____

2) Gender: Male_____ Female_____ Others_____

3) Age (Years): _____

4) Qualification:_____

5) Occupation:_____

6) Residence:_____

B) Public Awareness about implementation of AMRUT scheme in Anantnag Municipal Council Area of Jammu & Kashmir

1) Are you aware about AMRUT scheme? (Yes/No)

2) Are you aware about implementation of AMRUT scheme in Anantnag Municipal Council Area (Anantnag Town) and in Jammu & Kashmir? (Yes/No)

C) Public Perception about impact of AMRUT scheme on town planning and realization of SDG-11 targets in Anantnag Municipal Council Area of Jammu & Kashmir

Please indicate your level of agreement with the following statements by selecting one of the options on the 5-point Likert scale, where 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree.

S.No.	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Availability and Quality of water supply in Anantnag Municipal Council Area, have improved under the AMRUT scheme					
2	Sewerage facilities and septage management in Anantnag Municipal Council Area, have been enhanced under the AMRUT scheme					
3	Drainage system and storm water management systems, have been effectively developed in Anantnag Municipal Council Area, under the AMRUT scheme					
4	Road networks, pedestrian pathways, non-motorized and sustainable public transport facilities in Anantnag Municipal Council Area, have improved under the AMRUT scheme					
5	Recreational centres, public parks, and green spaces have been developed in Anantnag Municipal Council Area, AMRUT scheme					

6	AMRUT scheme has led to better land use and zoning (residential, commercial and industrial zones) in Anantnag Municipal Council Area					
7	AMRUT scheme has resulted in the creation of well-distributed public buildings such as hospitals, police stations and other government offices in Anantnag Municipal Council Area					
8	AMRUT scheme has improved the housing infrastructure in Anantnag Municipal Council Area, aligning it with modern town planning standards					
9	AMRUT scheme has successfully integrated sustainable development practices into the town planning process of Anantnag Municipal Council, such as use of solar energy, e-vehicles, cycling pathways etc.					
10	AMRUT scheme has significantly contributed in reducing adverse effects of natural disasters in Anantnag Municipal Council Area, through afforestation, cleaning of water bodies and proper waste management					
11	AMRUT scheme has helped to reduce adverse environmental impact in Anantnag Municipal Council Area					
12	AMRUT scheme has significantly improved the overall town planning in Anantnag Municipal Council Area					

D) Additional Questions

1. What are basic development issues of Anantnag Municipal Area (Anantnag Town)?
   _____
   _____

2. What steps have been taken by the government to promote sustainable development in your area? (Please specify)
   _____
   _____

3. How people can build a better town planning in Anantnag Town of Jammu & Kashmir? (Please provide your valuable suggestions)
   _____
   _____

@Thanks and best regards for sparing your precious time@

Index-2nd

Sample of RTI Applications used in the Present Study

The Public Information Officer (PIO) **Dated.....**
Office of Assistant Commissioner Development (ACD)
District Anantnag, J&K

Sub: Request for providing information under RTI ACT-2005

Respected Sir/Madam,

Please provide me the following information:

S. NO	Description of Requested Information
1.	Information regarding total funds sanctioned, allocated and utilized/un-utilized for each project 'taken up/completed' under AMRUT Mission in Anantnag Municipal Council region, since 2015 till date.
2.	Information regarding physical status and social impact/outcome of each project 'taken up/completed' under AMRUT Mission in Anantnag Municipal Council region, since 2015 till date.
3.	Information regarding challenges, if any, faced during implementation of various projects under AMRUT Mission in Anantnag Municipal Council region, such as issues of inter-departmental coordination, fund constraints, law and order concerns, and public support etc.
4.	Information regarding steps taken to promote drinking water, sanitation, waste management and drainage services in Anantnag Municipal Council region.

5.	Information regarding steps taken to promote open spaces, green spaces, community parks & recreational facilities and other Sustainable Development Solutions in Anantnag Municipal Council region.
6.	Information regarding steps taken to promote urban transport facilities in Anantnag Municipal Council region.

Processing fee has been kept in the form of IPO.

To facilitate easy transmission of requested information and to avoid postal service inconvenience, kindly send the requested information as soft copies through my personal email: rubayagull9@gmail.com.

Thanks & Best regards

Yours faithfully

Rubaya Akther
D/O: Gull Mohd Hajam
R/O: Devalgam, Kokernag, Anantnag (J&K)
Pin Code: 192202
Contact No: 7006969870// 7780915865

Index-3rd

List of Publications

S.No.	Title of Paper with Author Names	Name of Journal / Conference	Published Date	ISSN No/ Vol No, Issue No	Indexing in Scopus/ Web of Science/UGC-CARE list (*please mention*)
1.	Paper Title- Impact of Urban Waste Management on Public Health and Role of AMRUT Scheme: A Study of Jammu & Kashmir, India. Authors- Rubaya Akther, Dr. Danish Gulzar & Dr. Muzafer Rasool	JK-Practitioner	21-03-2024	ISSN-0971-8834 Volume- 29 Issue Number-1	Indexed in Scopus/ Web of Science/ UGC-CARE

Index-4th

List of Conference Papers

S.No.	Title of Paper with Author Names	Name of Journal / Conference	Published Date	ISSN No/ Vol No, Issue No	Indexing in Scopus/ Web of Science/UGC-CARE list (*please mention*)
1.	Paper Title- Sustainable Urban Planning in Jammu & Kashmir: Challenges and Opportunities Authors/Presenters- Rubaya Akther, Dr. Danish Gulzar, Sumaya Jan & Dr. Muzafer Rasool	International Conference on Multidisciplinary Research and Innovation (ICMRI-2024), conducted by Government College for Women MA Road Srinagar, J&K, India	19th-20th, March, 2024	NA	NA
2.	Paper Title- Urbanization Trends, Town Planning and Need for Sustainable Development in	First International Conference on Innovation and Intellectual	18th-19th, April, 2022	NA	NA

	Anantnag District of Jammu & Kashmir. Authors/Presenters- Rubaya Akther, Dr. Rajvinder Kaur & Dr. Muzafer Rasool	Property Rights (IPR), conducted by Lovely Professional University, Punjab.			
3.	Paper Title- Impact of AMRUT Mission on Skill Development and Women Empowerment in Anantnag District of Jammu & Kashmir Authors/Presenters- Rubaya Akther, Dr. Rajvinder Kaur & Dr. Muzafer Rasool	National Conference on Good Governance: Ideals and Times of Crisis, conducted by University of Lucknow, India	30th-31st, March, 2022	NA	NA
4.	Paper Titled- Healthcare, Social Well-being and COVID-19 Management in Anantnag District of Jammu & Kashmir.	NL Dalmia International Management Conference (NLDIMC-2022) on Rethinking Business Strategies to Drive	25th-26th, February, 2022	NA	NA

	Authors/Presenters- Rubaya Akther, Dr. Rajvinder Kaur & Dr. Muzafer Rasool	Innovations and Business Values, conducted by NL. Dalmia IMSR, Maharashtra.			
5.	Interdependence of Disaster Management, Town Planning & AMRUT Mission in Indian Perspective Authors/Presenters- Rubaya Akther, Dr. Danish Gulzar, Dr. Muzafer Rasool & Sumaya Jan	International Conference on Public Policy, Governance & Administration in Post Pandemic Era, organized by Department of Government & Public Administration, Lovely Professional University, Punjab	13-11-2024	NA	NA

Index-5th

List of Conferences/ Webinars/ Workshops/ FDPs Attended

S. No	Title of Conference/ Webinar/ Workshop	Organizer
1.	National Conference on Sustainable Environment: Challenges and Opportunities	NIT, Jalandhar.
2.	N. L. Dalmia International Management Conference (NLDIMC-2022) on Rethinking Business Strategies to Drive Innovations and Business Values	N.L. Dalmia IMSR, Maharashtra
3.	Changing Regional Dynamics in South East Asia	Lovely Professional University
4.	Pathways for 21st Century Teaching & Learning	MYCENTA Learner
5.	Emerging Dynamics in the Middle East & India's Options	Lovely Professional University
6.	Recent Trends in Information Technology & its applications	Patrician College of Arts and Science, Chennai
7.	Statistical & Economical Analysis of Data Through Packages	SKUAST, Jammu
8.	Climate Change and Global Capital: Collapse or Transformation	Mizoram University

9.	Self-Management & Employability Skills	NFED Business Facilitators Forum, Coimbatore
10.	NAAC New Guidelines and Importance of IQAC in Post COVID Time	KMG College of Arts & Science, Vellore
11.	ICSSR sponsored two day "National Seminar on Creating Inclusive and Sustainable Urban Spaces: Urbanization and Urban Planning in India with Special reference to Kashmir" organized by on March 13-14, 2023	University of Kashmir
12.	Five Day National Workshop on Research Methodology	NIT Srinagar, J&K
13.	SERB Sponsored Workshop on Smart Energy Systems for Sustainable Smart Cities- A Research Perspective	NIT, Puducherry
14.	National Webinar on the path towards Sustainable Water Management	IIM Sirmaur
15.	International Conference on New Tourism and New Normal in Post COVID-19 World	Central University of Jammu
16.	Webinar on State, Society and Education: Emerging concerns in Higher Education in India	Tata Institute of Social Sciences (TISS), Mumbai
17.	Two Days National Conference on Experiences on Decentralization, Tribal Local Self	IIPA & NTRI, New Delhi

	Governance & its Implications: Perspectives from Academics and Policy Makers	
18.	Seminar on Research and Library Services	Shri Shahu Mandir Mahavidyalaya, Pune
19.	South Asian Conference: Preparing Public Leaders in South Asia for a Post Pandemic World	NASPAA, SANPA & JSW School of Public Policy
20.	National Webinar on National Education Policy 2020: Role of Information Technology & IT Teachers	Dr. B R Ambedkar University of Social Sciences, Indore
21.	National Webinar on Innovation Solutions for Mitigation of Environmental Pollution, Control of Global Warming & Sustainance of Peace	Dr. B R Ambedkar University of Social Sciences, Indore
22.	National Level Professional Development Programme on the topic: Research Methodology and Data Analysis held from 9th -19th, August, 2023	Seshadripuram Academy of Business Studies, Bengaluru
23.	National Level Seminar on the topic: Intellectual Property Rights held on 31st August, 2023	Seshadripuram Academy of Business Studies, Bengaluru
24.	International Finance and Accounting Conference-IFAC 2023, held on 8th-9th September, 2023	Indian Institute of Management (IIM) Jammu

25.	Certificate in International Certified Career Coach	Career Development Alliance (CDA)-USA
26.	National Level Quiz Program on General Paper of UGC-NET	Hajee KRH College, Tamil Nadu
27.	International Conference on Peace, Harmony and Sustainable Living through Quality Education	Dr. B R Ambedkar University of Social Sciences, Indore MP
28.	One week National Level Faculty Development Program on Revise NAAC Framework Guidelines-2020	V. O. Chitambaram College, Thoothukudi
29.	Workshop on Research on Market Development	Institute of Management and Research, Jalgaon
30.	International Webinar on Digital Responsibility	IPEM Group of Institutions, Lucknow
31.	Certification in conquering intricacies of citations and references	Wiley Publications

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Other Achievements

1. Qualified **UGC-NET (JRF)** examination **in Public Administration**
2. Qualified **J&K-SET** examination in **Public Administration**
3. Received **Membership** of **Eastern Regional Organization for Public Administration (EROPA)**
4. Received **Associate Membership** of **South Asian Network for Public Administration (SANPA)**
5. **Completed Following Administrative courses-**

S.No.	Course title	Duration	Institute/Organization
1.	European Union Sponsored course on 'Environment and Sustainability"	2 Months	Lovely Professional University, Punjab
2.	Course on Challenges to Sustainable Development	3 Months	UGC-SWAYAM Portal
3.	Sustainable Rural Development	3 weeks	National Institute of Rural Development & Panchayat Raj.
4.	Panchayat Leadership Development	3 weeks	National Institute of Rural Development & Panchayat Raj.

5.	Social Empowerment & Inclusive Development	3 weeks	National Institute of Rural Development & Panchayat Raj portal.
6.	Biodiversity Governance	4 weeks	National Institute of Rural Development & Panchayat Raj portal.
7.	Gender Budgeting for Rural Development	3 weeks	National Institute of Rural Development & Panchayat Raj portal.

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Proofs of Publications & Conference Papers

JK-Practitioner ,Volume 29,Number 1,January-March 2024

Original Article

Impact of Urban Waste Management on Public Health and Role of AMRUT Scheme: A Study Of Jammu & Kashmir, India.

Rubaya Akther ,Danish Gulzar , Muzafer Rasool.

Abstract

Introduction

Public health lies at the heart of governance reforms under the United Nations Sustainable Development Goals paradigm. Littering of urban waste results in stinking of public spaces, increased dog bite cases, water pollution, air pollution and several vector-borne diseases.

Aim & Scope

The study aimed to explore impact of urban waste management strategies on public health in the Union Territory of Jammu & Kashmir-India, and analyze the mediating role of AMRUT scheme in augmentation of waste management services and subsequent public health services in the region.

Research Methodology & Techniques

The paper is based on public survey involving 50 research respondents from general public and key stakeholders, and analysis of data gathered by questionnaire method and secondary data. The primary respondents for the present study included 30 members from general public, 05 senior academicians from university of Kashmir and university of Jammu, 05 eminent journalists and 10 officers from various district administrations. 1-5 Likert scale has been used to analyze primary data and reveal results for the study.

Results and Findings

he results reveal that mean value for public satisfaction was obtained as (μ-2.0), which reveals that research respondents are least satisfied with the accessibility, affordability and quality of urban waste management and sanitation services in Jammu & Kashmir. The findings also highlight skewed implementation of AMRUT scheme visa vis facilitation of effective waste management strategies, and significant positive correlation between waste management and public health and social wellbeing.

Conclusion

Availability of optimum waste management, sanitation and public health services, forms core of an urban development plan. Developing countries, like India, need to emphasize adoption of best waste management mechanisms and formulation of area based development strategies. The regions such as Jammu & Kashmir, having world famous tourist destinations and natural landscapes, need to provide optimum global tourism infrastructure and standards of life quality for citizens and visitors. Public health, public safety and public hygiene, must be incorporated as prime objectives of urban development planning, to ensure inclusive and sustainable development.

JK-Practitioner2024;29(1):64-70

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Indexed
EMBASE ,SCOPUS , IndMED ,ESBCO, Google Scholar besides other national and international databases

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Full length article available at Jkpractitioner.com one month after publication

Keywords
Public Health, Well-being, Waste Management, AMRUT, Jammu & Kashmir

Introduction

The emerging paradigms of development policy in the 21st century world, have been sustainability, inclusivity, equitable development, environment protection and public health, more so due to the recent

GCW M.A ROAD SRINAGAR

ICMRI 2024

INTERNATIONAL CONFERENCE ON MULTIDISCIPLINARY RESEARCH AND INNOVATION

Certificate of Presentation

Presented to

Rubaya Akther

PHD RESEARCH SCHOLAR, DEPARTMENT OF GOVERNMENT AND PUBLIC ADMINISTRATION LOVELY PROFESSIONAL UNIVERSITY, PUNJAB-INDIA

Paper ID: ICMR-24031

Paper Title: Sustainable Urban Planning in Jammu & Kashmir: Challenges And Opportunities

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Presented to **Ms. Rubaya Akther** of **Lovely Professional University** in recognition of his/her presentation of paper tilted **Urbanization Trends, Town Planning and Need for Sustainable Development in Anantnag District of Jammu & Kashmir** in the **"International Conference on Innovation and Intellectual Property Rights"** held on **18-19th April, 2022** organized by Division of Research and Development, Lovely Professional University, Punjab.

Date of Issue: 13-05-2022
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Prepared by
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Convener
Dr. Rumjhun Tandon
IIAIPR 2022

Dr. Chander Prakash
CEL Division of Research and Development

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ATAL SUSHASAN PEETH

Department of Public Administration
University of Lucknow

National Seminar
on

Good Governance: Ideals and Times of Crises

Certificate of Participation

This is to certify that

Rubaya Akther, Dr. Manvendra Singh, Muzafer Rasool Hajam

participated in the National Seminar on "Good Governance: Ideals and Times of Crises" held on March 30-31,2022 and presented a paper entitled

Impact of AMRUT Mission on Skill Development and Women Empowerment in Anantnag District of Jammu & Kashmir

Prof. Manoj Dixit
Convenor

N. L. Dalmia

Institute of Management Studies and Research
(A School of Excellence of N. L. Dalmia Educational Society)

Certificate of Presentation

This is to certify that research paper titled

HEALTH CARE, SOCIAL WELL-BEING AND COVID-19 MANAGEMENT IN ANANTNAG DISTRICT OF JAMMU & KASHMIR

Authored by

Rubaya Akther, Rajvinder Kaur and Muzafer Rasool Hajam
of
Lovely Professional University, Punjab, India

has virtually presented in the N L Dlamia International Management Conference (NLDIMC-2022) on
"Rethinking Business Strategies to Drive Innovations and Business Values"
(Feburary 25-26, 2022)

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Certificate of Presentation

This is to certify that Mr./Ms./Dr. **Rubaya Akhter** of **Lovely Professional University** has gave Presentation on **Interdependence of Disaster Management, Town Planning and AMRUT Mission in Indian Perspective** in the **International Conference on "Public Policy, Governance and Administration in Post Pandemic Era" (PPGAPPE-2024)** held on **13th November 2024**, organized by the Department of Government and Public Administration, School of Liberal and Creative Arts (Social Sciences and Languages), at Lovely Professional University, Punjab.

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