

# Infrastructure And Planning in Krishna River Basin



**April 2025** 





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# **National River Conservation Directorate (NRCD)**

The National River Conservation Directorate, functioning under the Department of Water Resources, River Development & Ganga Rejuvenation, and Ministry of Jal Shakti providing financial assistance to the State Government for conservation of rivers under the Centrally Sponsored Schemes of 'National River Conservation Plan (NRCP)'. National River Conservation Plan to the State Governments/ local bodies to set up infrastructure for pollution abatement of rivers in identified polluted river stretches based on proposals received from the State Governments/ local bodies.

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# Centres for Krishna River Basin Management and Studies (cKrishna)

The Center for Krishna River Basin Management and Studies (cKrishna) is a Brain Trust dedicated to River Science and River Basin Management. Established in 2024 by NIT Warangal and NITK Surathkal, under the supervision of cGanga at IIT Kanpur, the center serves as a knowledge wing of the National River Conservation Directorate (NRCD). cKrishna is committed to restoring and conserving the Krishna River and its resources through the collation of information and knowledge, research and development, planning, monitoring, education, advocacy, and stakeholder engagement.

#### www.ckrishna.org

# Centres for Ganga River Basin Management and Studies (cGanga)

cGanga is a think tank formed under the aegis of NMCG, and one of its stated objectives is to make India a world leader in river and water science. The Centre is headquartered at IIT Kanpur and has representation from most leading science and technological institutes of the country. cGanga's mandate is to serve as think-tank in implementation and dynamic evolution of Ganga River Basin Management Plan (GRBMP) prepared by the Consortium of 7 IITs. In addition to this, it is also responsible for introducing new technologies, innovations, and solutions into India.

# www.cganga.org

#### Acknowledgment

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# PREFACE

In an era of unprecedented environmental change, understanding our rivers and their ecosystems has never been more critical. This report aims to provide a comprehensive overview of our rivers, highlighting their importance, current health, and the challenges they face. As we explore the various facets of river systems, we aim to equip readers with the knowledge necessary to appreciate and protect these vital waterways.

Throughout the following pages, you will find an in-depth analysis of the principles and practices that support healthy river ecosystems. Our team of experts has meticulously compiled data, case studies, and testimonials to illustrate the significant impact of rivers on both natural environments and human communities. By sharing these insights, we hope to inspire and empower our readers to engage in river conservation efforts.

This report is not merely a collection of statistics and theories; it is a call to action. We urge all stakeholders to recognize the value of our rivers and to take proactive steps to ensure their preservation. Whether you are an environmental professional, a policy maker, or simply someone who cares about our planet, this guide is designed to support you in your efforts to protect our rivers.

We extend our heartfelt gratitude to the numerous contributors who have generously shared their stories and expertise. Their invaluable input has enriched this report, making it a beacon of knowledge and a practical resource for all who read it. It is our hope that this report will serve as a catalyst for positive environmental action, fostering a culture of stewardship that benefits both current and future generations.

As you delve into this overview of our rivers, we invite you to embrace the opportunities and challenges that lie ahead. Together, we can ensure that our rivers continue to thrive and sustain life for generations to come.

Centers for Krishna River Basin Management and Studies (cKrishna)

NIT Warangal, NITK Surathkal

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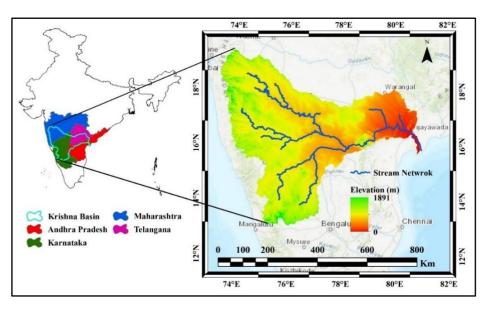
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# Introduction

Rivers have been central to the rise and sustenance of civilizations throughout history, and they continue to hold immense importance today. However, with ongoing socioeconomic development, rivers are under increasing pressure from various threats such as unsustainable water extraction, pollution, and degradation of natural habitats. The deteriorating condition of many rivers can be primarily linked to harmful human activities—particularly prevalent in urban areas. As a result, restoring river health must begin with addressing challenges within cities.

In the case of the Krishna River Basin, urban centers have significantly contributed to the basin's environmental stress. At the same time, these very cities must now take a leading role in the river's restoration and sustainable management. Approximately 34% of India's population resides in urban areas. Over the years, both the number and size of cities in the country have been steadily increasing. According to the 2011 Census of India, there were nearly 8,000 towns and cities, many of which experienced rapid growth compared to the previous decade.

The Krishna River Basin, covering an area of approximately 2,58,948 sq. km, is one of the major river basin in peninsular India. The river flows through the states of Maharashtra, Karnataka, Telangana, and Andhra Pradesh before emptying into the Bay of Bengal. The basin supports a significant population and plays a crucial role in the socio-economic fabric of the region. It is a vital source of surface water, contributing substantially to agricultural and domestic water use across the basin. A major share of this water—similar to other Indian basins—is diverted for irrigation purposes, making the basin an essential component of India's water resources system. Figure below represents the catchment area of Krishna River Basin (KRB) covering four states in India and spatial variation of elevation of the KRB.



**Figure 1:** Catchment area of Krishna River Basin covering four states in India and spatial variation of elevation of the basin.

# **Infrastructure and Planning for Krishna Basin**

The infrastructure planning and development of the Krishna River Basin play a crucial role in managing water resources, ensuring sustainable development, and supporting agriculture, industry, and urban settlements. The Krishna River, one of the major rivers of peninsular India, flows through Maharashtra, Karnataka, Telangana, and Andhra Pradesh, making its management a complex and multi-state endeavor. Infrastructure development in the basin primarily focuses on water resource management through the construction of dams, reservoirs, irrigation systems, and hydropower projects. Large-scale projects like the Nagarjuna Sagar Dam, Almatti Dam, and Srisailam Dam regulate water flow, provide irrigation support to millions of farmers, and generate hydroelectric power. Additionally, extensive canal networks facilitate water distribution, ensuring that both agricultural and urban needs are met efficiently. Apart from water management structures, infrastructure planning also involves flood control measures, wastewater treatment plants, and inter-basin water transfer projects aimed at balancing water availability across regions. With rapid urbanization, cities within the basin require robust water supply systems, sewage treatment facilities, and smart infrastructure to prevent pollution and maintain water quality. Industrial growth along the basin necessitates strict regulations and sustainable planning to prevent environmental degradation. The river's health is increasingly affected by pollution from agricultural runoff, industrial discharge, and urban wastewater, leading to the need for river rejuvenation initiatives and ecological conservation measures.

# **Urban Development in Krishna River Basin**

One of the major challenges in urban development within the Krishna Basin is water resource management. As cities expand, the demand for potable water increases, often leading to over-extraction of groundwater and higher dependency on river water. This has prompted the construction of reservoirs, pipelines, and treatment plants to meet urban water needs. However, inefficient water distribution systems and high levels of water loss due to leakage remain critical concerns. Additionally, wastewater and sewage disposal have become pressing issues, with untreated or partially treated sewage often being discharged into the Krishna River and its tributaries, contributing to pollution and ecosystem degradation.

# • Urban built-up expansion:

The urban built-up expansion in the Krishna River Basin across Karnataka, Maharashtra, Andhra Pradesh, and Telangana has been analysed using data from Bhuvan NRSC for the years 2005-2006 and 2015-2016. This analysis highlights the decadal changes in urbanization patterns, reflecting the increasing pressure on land and water resources due to rapid urban growth. The expansion of built-up areas has been assessed sub-basin-wise across all seven sub-basins of the Krishna River, allowing for a detailed understanding of spatial and temporal trends in urban development.

The study reveals significant growth in urban built-up areas, particularly around major cities such as Pune, Solapur, Vijayawada, Hyderabad, and Bagalkot, which fall within the basin. Urbanization has been driven by population growth, industrialization, and infrastructure development, leading to increased land conversion from agricultural and natural landscapes to urban settlements. The graphical representation of sub-basin-wise urban expansion demonstrates variations in growth rates across different regions, with certain sub-basins experiencing higher urban sprawl due to economic and demographic factors. The findings emphasize the need for sustainable urban planning strategies to balance development with environmental conservation. The growing urban footprint has implications for water demand, wastewater generation, and land-use changes, necessitating integrated management approaches to mitigate adverse effects on river flow and ecosystem health. The decadal assessment provides valuable insights for policymakers and planners in formulating strategies for sustainable urban development within the Krishna River Basin.

The urban built-up representation for the year 2005-2006 in Karnataka, Maharashtra, Telangana and Andhra Pradesh covering all the Krishna river sub basins is presented district-wise in the table and figure below.

**Table 1:** Urban built-up expansion for the year **2005-2006** district wise

SI No.	Sub basin	Districts	Urban built-up Area in Sq.km
		Bellary	98.71
		Chikamagluru	36.65
		Chitradurga	40.24
	Upper	Davangere	59.55
	Tungabhadra	Dharwad	84.2
1	<b>.g</b>	Raichur	37.45
		Shivamogga	50.46
		Tumkur	62.09
		Uttar kannada	141.87
		Bagalkot	70.53
	_	Hassan	47.61
	Lower	Koppal	33.72
2	Tungabhadra	Ananthpur	74.95
2		Kurnool	55.11
		Mahbubanagar	54.09
		Satara	44.66
_		Sangli	67.59
3	Upper Krishna	Kolhapur	105.04
		Bijapur	43.08
		Gadag	30.7

		Sindhudurg	15.84
		Belagavi	102.16
		Pune	356.32
		Osmanabad	33
4	Upper and	Solapur	100.19
	Lower Bheema	Raigad	109.08
		Ahmednagar	83.64
		Hyderabad	201.23
_		Guntur	93.17
5	Middle and	Khammam	92.99
	Lower Krishna	Krishna	101.47
		Nalgonda	92.74
		Rangareddy	677.83

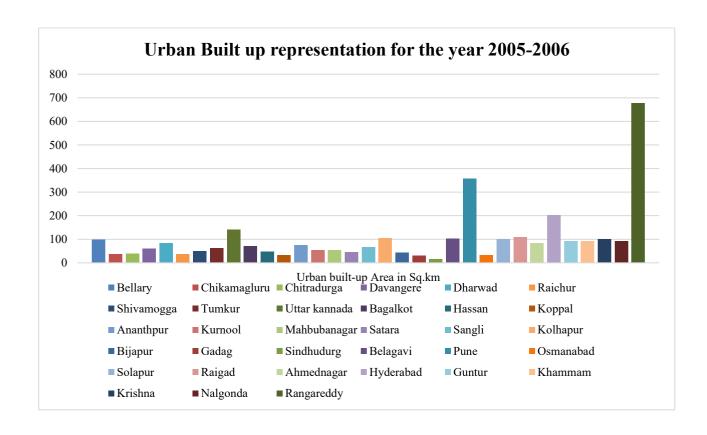
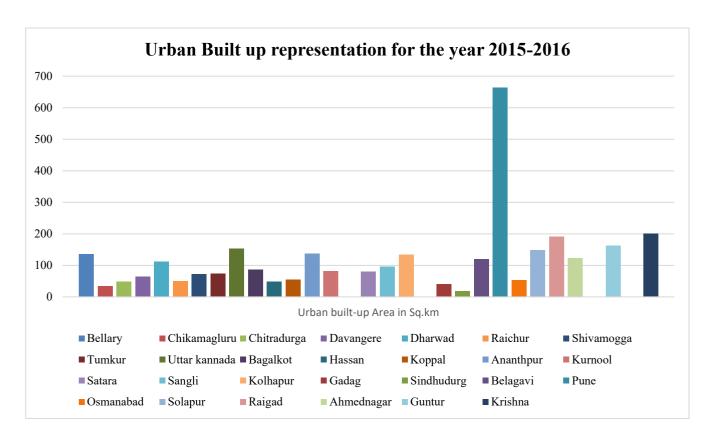


Figure 2: Urban Built-up expansion for the year 2005-2006 district wise.

The urban built-up representation for the year 2015-2016 in Karnataka Maharashtra, Telangana and Andhra Pradesh state covering the Upper Bheema, Lower Bheema, Upper Tungabhadra, Lower Tungabhadra, Upper Krishna, Middle Krishna and Lower Krishna regions, is presented district-wise in the table and figure below.

Table 2: Urban built-up expansion for the year 2015-2016 district wise.

Sl. no	Sub basin	Districts	Urban built- up Area in Sq.km
		Bellary	135.01
		Chikamagluru	34.04
		Chitradurga	47.93
1	Upper Tungabhadra	Davangere	64.2
1	opper rungabhaura	Dharwad	112.73
		Raichur	49.56
		Shivamogga	72.41
		Tumkur	74.21
		Uttar kannada	152.98
		Bagalkot	86.04
		Hassan	48.38
2	Lower Tungabhadra	Koppal	54.43
		Ananthpur	137.4
		Kurnool	81.14
		Mahbubanagar	-
		Satara	80.1
		Sangli	95.13
		Kolhapur	134.46
3	Upper Krishna	Bijapur	-
3	Opper Krisinia	Gadag	40.94
		Sindhudurg	18.28
		Belagavi	120.14
		Pune	664.23
		Osmanabad	53.16
4	Upper and Lower	Solapur	148.8
	Bheema	Raigad	191.92
		Ahmednagar	122.82
		Hyderabad	-
		Guntur	162.6
		Khammam	-
5	Middle and Lower	Krishna	200.08
3	Krishna	Nalgonda	-
		Rangareddy	-



**Figure 3:** Urban Built-up expansion for the year 2015-2016 district wise.

# • Smart City Mission:

The Smart Cities Mission (SCM) has played a significant role in enhancing urban infrastructure and governance in the Krishna River Basin across Karnataka, Andhra Pradesh, Maharashtra, and Telangana. As part of this mission, several cities within the basin have undertaken projects aimed at improving urban mobility, water supply, sanitation, waste management, and digital governance. The list of completed projects under SCM funding, as of July 7, 2023, has been documented in a state-wise table, showcasing the progress made in various urban centers. These projects have contributed to sustainable urban development, promoting smart solutions for efficient city management. The implementation of smart infrastructure in key cities along the Krishna River, such as Vijayawada, Pune, Hyderabad, and Belagavi etc.. has not only improved the quality of life for residents but also strengthened resilience against environmental challenges. The compiled data offers insights into the successful execution of smart initiatives, reflecting the region's commitment to modern urban planning and sustainable growth.

A detailed description of the completed projects in state wise provided in the table. The projects under the Smart City Mission are listed for Karnataka (Table 3), Maharastra (Table 4), Telangana in (table 5) and Andhrapradesh in (table 6)

Table 3: Projects under Smart City Mission in Karnataka

Sl no	State Name	City Name	Project Name	Cost (Rs. Cr)
1258	Karnataka	Belagavi	Smart Demo Roads at KPTCL and Mandoli Road 3 Smart Roads with - Multi Utility UG Ducting- Pedestrian Friendly Pathways- Carrigeway Improvement- Road Junction Ambience ABD + PAN - Road Side Drinking Water Kiosks	29.26
1259	Karnataka	Belagavi	Heritage Park – Phase I Water Body & Check Dam	1.87
1260	Karnataka	Belagavi	Central Command CenterIncludes - Solid Waste Management - Smart Water metering- Intelligent Traffic Management System	51.23
1261	Karnataka	Belagavi	Kanbargi lake rejuvenation recreational spaces	4.74
1262	Karnataka	Belagavi	Smart Bus shelters with dedicated bus bay (Phase-01)	1.91
1263	Karnataka	Belagavi	Development of Theme Based Park - NathPai Garden, Upgrading Green spaces- Neighbourhood parks	0.98
1264	Karnataka	Belagavi	Energy Audit for existing Street Lighting	0.24
1265	Karnataka	Belagavi	Rehabilitation for Cattle and Pigs	0.59
1266	Karnataka	Belagavi	Rain water harvesting and Composting Facility in Parks	0.04
1267	Karnataka	Belagavi	Skill Development Center	7.82
1268	Karnataka	Belagavi	Parking of Private Buses, Mini Buses on hire charges	2.16
1269	Karnataka	Belagavi	Construction of 30 bed Maternity Hospital at Vantamuri, Up-gradation of Primary Health Centers	2.39
1270	Karnataka	Belagavi	Construction of Cycle Track and Footpath (NMV Package 2) (Pedestrian Paths (PAN))	32.08
1271	Karnataka	Belagavi	Construction of Cycle Track and Footpath NMV Package I Cycle Tracks PAN	4.75
1272	Karnataka	Belagavi	Roadside Drinking Water Kiosk (Phase-I)	0.37
1273	Karnataka	Belagavi	Construction of Command and Control Centre Building	3.01
1274	Karnataka	Belagavi	Smart Road Package I 2.475 Km	44.67
1275	Karnataka	Belagavi	Smart Roads Package II 3.42 Km	45.35
1276	Karnataka	Belagavi	Smart Roads Package III	22.70
1277	Karnataka	Belagavi	UG LT Cabling -Package 1 Shrinagar Area	8.85
1278	Karnataka	Belagavi	UG LT Cabling -Package 2 Mahantesh Area	8.25
1279	Karnataka	Belagavi	UG LT Cabling -Package 3	10.15
1280 1281	Karnataka Karnataka	Belagavi Belagavi	Heritage Park - Other Works  Development of Theme Based park - mahatma Phule (Theme Based Other Parks )	3.13
1282	Karnataka	Belagavi	Remaining Road side drinking water Kiosk	0.53
1283	Karnataka	Belagavi	Trauma Center at Dharamnath Circle	1.38
1284	Karnataka	Belagavi	Mohalla Clinics	1.84
1285	Karnataka	Belagavi	Smart Classroom	3.32
1286	Karnataka	Belagavi	Smart Bus Shelters	1.69
1287	Karnataka	Belagavi	Public Bike Share	3.71
1288	Karnataka	Belagavi	Battery operated Auto Rikshaws Retrofitting Kit	1.03
1289	Karnataka	Belagavi	Rehabilitation of Pigs Phase II	0.23
1290	Karnataka	Belagavi	Intelligent Traffic management System	1.71
1291	Karnataka	Belagavi	White Topping Package I	39.37
1292	Karnataka	Belagavi	White Topping Package II	44.13
1293	Karnataka	Belagavi	White Topping Package III	26.54
1294	Karnataka	Belagavi	White Topping Package IV	6.72
1295	Karnataka	Belagavi	White Topping Package V	14.03
1296	Karnataka	Belagavi	Smart Roads at Shahpur Area Package IV	35.77
1297	Karnataka	Belagavi	Smart Road at Tilakwadi Area Package V	45.35
1298 1299	Karnataka Karnataka	Belagavi Belagavi	UG LT package V	8.24 7.87
1300	Karnataka	Belagavi Belagavi	UG LT package V Smart Bus Shelter Phase II	3.98

1301	Karnataka	Belagavi	Sanitary vending machine and incinerator	0.31
1302	Karnataka	Belagavi	Procurement of digital bill board	0.74
1303	Karnataka	Belagavi	Construction of Footpath and Cycle track Package 3	7.66
1304	Karnataka	Belagavi	UG LT Cabling -Package 6	8.69
1305	Karnataka	Belagavi	UG LT Cabling -Package 7	8.14
1306	Karnataka	Belagavi	UG LT Cabling -Package 8	8.75
1307	Karnataka	Belagavi	UG LT Cabling -Package 9	9.12
1308	Karnataka	Belagavi	Smart Classroom Phase II	1.35
1309	Karnataka	Belagavi	Development of Garden in Rukmini Nagar	0.25
1310	Karnataka	Belagavi	Construction of Hockey Stadium in Camp Area	0.95
1311	Karnataka	Belagavi	Smart Road with pavers Blocks at shastri Nagar, Kapileswar Colony and Mahadva Road No.5(package 6): 9.5km	8.78
1312	Karnataka	Belagavi	Smart Roads with Paver Blocks at Tilakwadi, Vivekanad Colony and Martha Colony Package 7	9.92
1313	Karnataka	Belagavi	Smart Road with pavers Blocks at shanti Nagar package	8.33
1314	Karnataka	Belagavi	Smart Road with White Topping at Hotel at Anagol road Big Bazar to Medical shop package 10 1.73 Km	9.58
1315	Karnataka	Belagavi	Smart Road with White Topping at vadgaon Road to Mahaveer Bhawan package 11 1.73	11.20
1316	Karnataka	Belagavi	UG LT Cabling with Topping Decorative Poles PAN Package X Bank of india to Basveswar Circle khasbag	8.57
1317	Karnataka	Belagavi	UG LT Cabling with Topping Decorative Poles PAN Package XI Basaveswar Circle Khasbag to Patson Ford Hossur	7.52
1318	Karnataka	Belagavi	Theme based Park Development Saraf Colony	1.05
1319	Karnataka	Belagavi	Theme based Park Development Patwardhan Layout	1.56
1320	Karnataka	Belagavi	Theme based Park Development Nathpai Phase II	0.90
1321	Karnataka	Belagavi	Theme based Park Development Shanti Nagar	1.75
1322	Karnataka	Belagavi	Construction of Footh Path Cycle Track NMV-IV At Railway 4 th Gate To Bemco Factory In Belagavi CITY	5.53
1323	Karnataka	Belagavi	Trauma Center Part -B	1.15
1324	Karnataka	Belagavi	Construction of Roads with Paver Blocks at Rani Chennamma Nagar 1st Stage in Belagavi City Package-16	2.30
1325	Karnataka	Belagavi	Construction of Roads with Paver Blocks at Arjun Colony R.C.Nagar in Belagavi City Package-17	3.06
1326	Karnataka	Belagavi	Construction of Roads with Paver Blocks at Shastri Nagar -Balance Roads North side of Mahatma phule Roads till Nalla in Belagavi City Package-18	4.11
1327	Karnataka	Belagavi	Construction of Roads with Paver Blocks at Shastri Nagar -Balance Roads Behind Nartaki Theatre Godse Colony area in Belagavi City Package -19	5.77
1328	Karnataka	Belagavi	Construction of Roads with Paver Blocks at SBI Colony R.C.Nagar in Belagavi City Package-14	2.67
1329	Karnataka	Belagavi	Construction of Roads with Paver Blocks at Raghavendra Colony R.C.Nagar in Belagavi City Package-15	3.84
1330	Karnataka	Belagavi	Development of Anganawadi at Belagavi.Part-A	2.25
1331	Karnataka	Belagavi	Construction of Roads with Paver Blocks in SV Road -Chidambar Nagar in Belagavi City.Package-20	3.33

1332	Karnataka	Belagavi	Construction of Roads with Paver Blocks in Mrityunjaya Nagar in Belagavi City, Package -21	3.54
1333	Karnataka	Belagavi	Construction of Roads with Paver Blocks in Chidambar Nagar Part-I in Belagavi City, Package-22	4.22
1334	Karnataka	Belagavi	Construction of Roads with Paver Blocks in Chidambar Nagar Part -II, in Belagavi City. Pckage-23	2.45
1335	Karnataka	Belagavi	Construction of Roads with Paver Blocks in Chidambar Nagar Part -III, in Belagavi City. Pckage-24	2.91
1336	Karnataka	Belagavi	Providing basic facility and upgrading infrastructure to the newly developed Smart Schools in Belagavi City.	3.83
1337	Karnataka	Belagavi	Up-gradation of Govt Library into Hi-tech Digital Library Phase-I	1.22
1338	Karnataka	Belagavi	Smart Road with White Topping at Ashoka Circle to NH in Belagavi City Package - 12	8.81
1339	Karnataka	Belagavi	Construction of Roads with Paver Blocks at Rani Chennamma Nagar 2nd Stage part- I in Belagavi City Package-25	3.91
1340	Karnataka	Belagavi	Construction of Roads with Paver Blocks at Rani Chennamma Nagar 2nd Stage part- II in Belagavi City Package-26	2.60
1341	Karnataka	Belagavi	NMT Howker Zone -Mahila Market	1.33
1342	Karnataka	Belagavi	Upgradation of Govt city Library into Hi-tech of Digital Library Phase-II-ICT	1.35
1343	Karnataka	Belagavi	Smart Classroom Phase-IV	4.01
1344	Karnataka	Belagavi	ICT Phase-II	4.45
1345	Karnataka	Belagavi	Procurement of mechanical sweeper machine	1.49
1346	Karnataka	Belagavi	NMT Zone Hawkers Zone PAN	7.99
1347	Karnataka	Belagavi	Improvement of BIMS hospital	1.32
1348	Karnataka	Belagavi	Development of Slum at Rukmini Nagar	5.32
1349	Karnataka	Belagavi	Development of Parks at Mahabaleshwar Park, Chikku Baug Park, Mahalaxmi Temple Park, Police Colony Park and Sarathi Nagar Park in Belagavi City	3.18
1350	Karnataka	Belagavi	Improvement of Lakes:Kotekere Phase I	3.58
1351	Karnataka	Belagavi	Improvement of Lakes:Kotekere Phase II	1.98
1352	Karnataka	Belagavi	Improvement of Lakes:Kotekere Phase III	2.06
1353	Karnataka	Belagavi	Development of Anganwadi Part B	0.74
1354	Karnataka	Belagavi	Kids zone at Ravindra Koushik e- library in Belagavi City	2.20
1355	Karnataka	Belagavi	Upgradation of GIS Software License -KUIDFC	0.81
1356	Karnataka	Bengaluru	Shivajinagar Bus Terminal Redevelopment	3.82
1357	Karnataka	Bengaluru	Protection and Redevelopment of a Botanically Varied Parkland - Cubbon Park Phase A	22.73
1358	Karnataka	Bengaluru	Integrated Control and Command Centre ICCC	118.87
1359	Karnataka	Bengaluru	Revitalization of historic heart of the city - Smart Tender SURE Roads Package 1	35.93
1360	Karnataka	Bengaluru	Redevelopment of historic heart of the city - Smart Tender SURE roads Package 2	29.27
1361	Karnataka	Bengaluru	Revitalization of historic heart of the city- Smart Tender SURE roads Package 3	53.44
1362	Karnataka	Bengaluru	Revitalization of historic heart of the city - Smart Tender SURE roads Package 4	39.98
1363	Karnataka	Bengaluru	Revitalization of historic heart of the city- Smart Tender SURE roads Package 5  Payitalization of historic heart of the city- Smart Tender SURE roads	29.78
1364	Karnataka	Bengaluru	Revitalization of historic heart of the city - Smart Tender SURE roads Package 6	45.75

1365	Karnataka	Bengaluru	Revitalization of historic heart of the city-Smart Tender SURE roads Package 7	39.97
1366	Karnataka	Bengaluru	Revitalization of historic heart of the city - Smart Tender SURE roads Phase B Package 1	44.29
1367	Karnataka	Bengaluru	Revitalization of historic heart of the city - Smart Tender SURE Roads Phase B Package 2	43.42
1368	Karnataka	Bengaluru	Revitalization of historic heart of the city- Smart Tender SURE roads Phase B Package 3	16.94
1369	Karnataka	Bengaluru	Revitalization of historic heart of the city - Smart Tender SURE Roads Phase B Package 5	48.92
1370	Karnataka	Bengaluru	Revitalization of historic heart of the city-Smart Tender SURE roads Phase B Package 6	27.30
1371	Karnataka	Bengaluru	Integrated Mobility Hub and Junction Improvement at K R Market	21.30
1372	Karnataka	Bengaluru	Protection and Redevelopment of a Botanically Varied Parkland - Cubbon Park Phase 2	20.88
1373	Karnataka	Bengaluru	Procurement of Electric buses and Charging Infrastructure-Feeder service to Namma Metro by BMTC	50.00
1374	Karnataka	Bengaluru	LED Lighting for Vidhana Soudha, Vikas Soudha, MS Building and VV Towers	1.90
1375	Karnataka	Bengaluru	Digital Health Infrastructure for BBMP and Bengaluru Urban District	13.22
1376	Karnataka	Bengaluru	Provision of Medical Equipments to Institute of Gastroenterology Sciences and Organ Transplant	4.90
1377	Karnataka	Bengaluru	Civil Works at Bengaluru Medical College and Research Institute	11.72
1378	Karnataka	Bengaluru	Provision of Medical Equipments to Kidwai Memorial Institute of Oncology	6.85
1379	Karnataka	Bengaluru	COVID-19 related Infrastructure works by Health and Family Welfare Department	1.86
1380	Karnataka	Bengaluru	Provision of High Flow Nasal Cannula, HFNC by Directorate of Medical Education	4.80
1381	Karnataka	Bengaluru	Provision of Medical Equipments to Rajiv Gandhi Institute of Chest Diseases	0.80
1382	Karnataka	Bengaluru	Completion of Mini Auditorium, Additional work and Interior work for Department of Women and Child Welfare	4.98
1383	Karnataka	Bengaluru	New Works for the Institutes of the Department of Women and Child Welfare	3.28
1384	Karnataka	Bengaluru	Construction of Day Care Centre Creche at MS Building	0.53
1385	Karnataka	Bengaluru	Provision of Medical Equipments to Bangalore Medical College and Research Institute-COVID-19 Response	9.24
1386	Karnataka	Bengaluru	Implementation of Digital Class rooms and Computer Labs in BBMP Schools and PU Colleges	6.46
1387	Karnataka	Bengaluru	Implementation Smart Traffic Management System by Body worm Cameras (BWC) and Automatic Number Plate Recognition (ANPR) Solution in CBD Area for Bengaluru Traffic Police	8.73
1388	Karnataka	Bengaluru	Provision of Medical Equipment's to Vanivilas Hospital	18.40
1389	Karnataka	Bengaluru	IMPROVEMENTS AND UPGRADATION OF PADARAYANAPURA SCHOOL IN CHAMARAJPETE	1.98
1390	Karnataka	Bengaluru	Selection of Master System Integrator for Design, Development, Implementation, Operation and Maintenance of Smart Virtual Clinic for Bengaluru	18.35
1391	Karnataka	Bengaluru	IMPLEMENTATION OF SMART DIGITAL CLASSROOM AT BBMP ANGANWADI	4.46

			CENTRES	
1392	Karnataka	Bengaluru	Provision of Medical Equipments to Indira Gandhi Institute and BMCRI	8.00
1393	Karnataka	Bengaluru	Providing Smart Traffic Solutions to Bengaluru Traffic Police at ABD area-Phase-2	1.94
1394	Karnataka	Davanagere	Old City Bus Stand Redevelopment	26.29
1395	Karnataka	Davanagere	Heritage Block- Durgambika Temple	4.02
1396	Karnataka	Davanagere	Smart Bus Shelters	2.82
1397	Karnataka	Davanagere	Junction Improvements	8.69
1398	Karnataka	Davanagere	Command and Control Centre Construction of Building	15.70
1399	Karnataka	Davanagere	Redevelopment of Jagaluru Bus Stand	3.71
1400	Karnataka	Davanagere	Implementation of ICT Project in Davanagere	94.65
1401	Karnataka	Davanagere	Construction of Public Toilets in Mandakki Bhatti	0.45
1402	Karnataka	Davanagere	PROVIDING INSTALLATION AND COMMISSIONING OF GASIFIER FOR PUFFED RICE MANUFACTURING 5 NO UNIT WITH AL	0.23
1403	Karnataka	Davanagere	Improvements to Chowkipet Road in Davanagere City	14.27
1404	Karnataka	Davanagere	Remodelling of Storm Water Drains in ABD Area-Kondajii Road Drain Drain No D1, D1A, D2, D3, D5 D6	16.06
1405	Karnataka	Davanagere	Remodelling of Storm Water Drains in ABD Area-Basha Nagar Main Road - Drain No:D7 & D8	4.89
1406	Karnataka	Davanagere	Remodelling of Storm Water Drains in ABD Area-KR Road Drain Razual Mustafa Nagar 2nd Main Road-Dra	5.43
1407	Karnataka	Davanagere	Remodelling of Storm Water Drains in ABD Area-Infront of Fish Market- Drain No D13 D15	9.88
1408	Karnataka	Davanagere	Remodelling of Storm Water Drains in ABD Area-Kondajii Road Drain- Drain No D4A and D4B	16.21
1409	Karnataka	Davanagere	Remodelling of Storm Water Drains in ABD Area-SPS Nagar Drain	5.58
1410	Karnataka	Davanagere	Improvement of MG Road in Davanagere City - 2nd Call.	5.78
1411	Karnataka	Davanagere	Improvement of Mandipet Road in Davanagere City	7.46
1412	Karnataka	Davanagere	Improvement of Chamarajapet Road in Davanagere City	6.89
1413	Karnataka	Davanagere	Pilot project 2 - Providing installation and commissioning of Gassifier model based for puffed rice	0.16
1414	Karnataka	Davanagere	Improvement of Binny Company Road	5.95
1415	Karnataka	Davanagere	Improvement of KR Market Road	3.66
1416	Karnataka	Davanagere	Improvement of Drains and Foot path in NR Road	1.67
1417	Karnataka	Davanagere	Improvement of Drains Foot path in KR to HC Road	1.99
1418	Karnataka	Davanagere	Pilot project 3 - Construction of Working shed in Mandakki Bhatti	0.21
1419	Karnataka	Davanagere	Remodelling of Storm Water Drains around Durgambika temple	7.53
1420	Karnataka	Davanagere	Redevelopment of Kalyani at Hondada Circle and Clock Tower	3.12
1421	Karnataka	Davanagere	Kunduvada Lake development with Bund improvement	19.35
1422 1423	Karnataka Karnataka	Davanagere Davanagere	E-Rickshaw	0.42
1423	Karnataka	Davanagere	E Toilets in 9 parks, Davanagere City, Phase 1  Public Bicycle Sharing System in Davanagere City	1.39 9.99
1425	Karnataka	Davanagere	Civil works for retrofitting with gasifier and heat recovery unit on pilot basis at  Mandakki Bhatti	0.03
1426	Karnataka	Davanagere	Improvement of secondary drains at Basavarajpete, Basha Nagar, Mandipete & Maganahalli road in ABD area	13.89
1427	Karnataka	Davanagere	Development of Pedestrian Foot path in ABD area	19.83
1428	Karnataka	Davanagere	Basic infrastructure development works in Ashraya layout falling in ABD area	36.67
1429	Karnataka	Davanagere	Construction of Electrical crematorium	3.65

1430	Karnataka	Davanagere	Installation of Signage and name boards	4.36
1431	Karnataka	Davanagere	Pilot 3b, Gasifier model based puffed rice manufacturing unit with machines	0.19
			and	
			equipments	
1432	Karnataka	Davanagere	Providing compound wall and gate to the new public toilet at Mandakki Bhatti rae	0.15
1433	Karnataka	Davanagere	Improvement of basic infrastructure in Mandakki Bhatti area	15.75
1434	Karnataka	Davanagere	Relocation of old bus stand	2.30
1435	Karnataka	Davanagere	Gym equipment in Mandakki Bhatti park in ABD area	0.08
1436	Karnataka	Davanagere	Improvement to maternity hospital in Basha nagar in ABD area	1.55
1437	Karnataka	Davanagere	Improvement of schools in ABD area	2.30
1438	Karnataka	Davanagere	Provision for satellite command control center at SP office	0.21
1439	Karnataka	Davanagere	Establishment of smart schools in Davanagere	3.03
1440	Karnataka	Davanagere	Gym and Play equipment in Davanagere City Phase-1	2.26
1441	Karnataka	Davanagere	Development of ring road and its approaches	56.67
1442	Karnataka	Davanagere	Major storm water drains in pan city	23.83
1443	Karnataka	Davanagere	E toilet in Davanagere City(Phase 2)	5.05
1444	Karnataka	Davanagere	Afforestation along smart road	0.82
1445	Karnataka	Davanagere	Basic infrastructure development for Urdu School in Mandakki Bhatti area	0.55
1446	Karnataka	Davanagere	Basic infrastructures to 7 roads	22.94
1447	Karnataka	Davanagere	Junction Improvement Phase 2	4.41
1448	Karnataka	Davanagere	installation of Digital Display Boards	2.45
1449	Karnataka	Davanagere	Installation of Sanitary Napkin Vending Machine and Incinerator	0.16
1450	Karnataka	Davanagere	Development, operating and maintenance of Smart Bus Q shelter - Phase II	4.16
1451	Karnataka	Davanagere	ICCC building and smart city office interior and furniture	1.40
1452	Karnataka	Davanagere	Laser show at Kunduwada lake and musical fountain, installation of lights	4.92
			and	
			improvements in Glass house	
1453	Karnataka	Davanagere	Construction of skew bridge across outer ring road and other culverts	3.77
1454	Karnataka	Davanagere	Installation of Gym and play equipment in parks Phase II	3.44
1455	Karnataka	Davanagere	Afforestation along roads Phase II	4.23
1456	Karnataka	Davanagere	Major storm water drain from Mattikal to BethurHalla	2.73
1457	Karnataka	Davanagere	Basic infrastructure development works in SSM Nagar, Beedi Layout,	9.69
			Paravathamma Nagara of ABD area.	
1458	Karnataka	Davanagere	Open Air Theatre at Visual Art College affiliated to Davanagere University	6.21
			Campus	
			Govt.College	
1459	Karnataka	Davanagere	Major storm water drain from Shamanur Rudra bhoomi to Kundawada WTP	14.48
			2km	
			length.	
1460	Karnataka	Davanagere	Redevelopment of road from Govt. employees samudaya bhavana New clock	8.80
			circle to Saptagiri School-Corporation road	
1461	Karnataka	Davanagere	Construction of Research and Development Building in UBDT College of	4.67
			Engineering affiliated to VTU	
1462	Karnataka	Davanagere	Major storm water drains in ABD area Koracharatti to Bethur	2.77
1463	Karnataka	Davanagere	Mini water tender with mist technology vehicle and other necessary	1.00
			equipment	
			for fire and emergency services department.	
1464	Karnataka	Davanagere	Rejuvenation of swimming pool in Devaraj Urs layout under the ownership	3.12
			of	
			department of youth and sport services.	
1465	Karnataka	Davanagere	Redevelopment of Tennis court situated in High school ground, maintained	1.38
			by district tennis club association and land leased out from education	
			department.	
1466	Karnataka	Davanagere	Smart school project, Phase-2	1.99
1467	Karnataka	Davanagere	Improvement of government school buildings in North zone of Davanagere	3.60
			city.	
1468	Karnataka	Davanagere	Improvement of government school buildings in South zone of Davanagere	3.61

1469	Karnataka	Davanagere	Establishment of Smart Schools in Davanagere city Phase-3	4.38
1470	Karnataka	Davanagere	Establishment of Smart Colleges in Davanagere city	4.60
1471	Karnataka	Davanagere	Approach Bridge across Nala near SSM Nagar B Block	1.73
1472	Karnataka	Davanagere	Implementation of Blood Seperation unit in Red cross society, Davanagere	0.62
1473	Karnataka	Davanagere	Supply of spraying machines mounted on 3-4 wheeler vehicle.	0.25
1474	Karnataka	Davanagere	Improvements of Government high school building in Davanagere City	2.00
1475	Karnataka	Davanagere	Providing Raw Water Transmission Bypass Line by tapping the existing pipeline nearby Kundawada lake directly to Kundawada WTP	1.42
1476	Karnataka	Davanagere	Illumination to Kalyani and Clock Tower	0.65
1477	Karnataka	Davanagere	Pathway and Beautification works for Kalyani Honda at Hondada Circle.	0.55
1478	Karnataka	Davanagere	Construction of Road and Storm Water Drain around Stadium near SSM Nagar	2.60
1479	Karnataka	Davanagere	Installation of Additional Furnance and Allied works for existing Electrical Crematorium at Shamanur Rudrabhoomi	2.00
1480	Karnataka	Davanagere	Re-Construction of Bridge and approach drain in RMC Road towards Bharath Colony, From Indudhar Rice Mill to Jodi Banni Mara Near Bharath Colony and Near KSRTC Bus Stand.	3.50
1481	Karnataka	Davanagere	Construction of CC Drain in front of Shivali Talkies (East Side)	2.20
1482	Karnataka	Davanagere	Development of Road from Shamanur Road Chowdeshwari Temple (Opposite to BIET College) to Glass House Road including other approach roads from Shamanur Road.	7.72
1483	Karnataka	Davanagere	Development of Road in Taralabalu Badavane 1st and 2nd Main Road and CC Road from Hadadi Road to Chikkamanni Badavane junction near to KPTCL.	8.50
1484	Karnataka	Davanagere	Construction of Indoor Kabbadi Court at District Stadium.	0.80
1485	Karnataka	Davanagere	Providing additional infrastructure to Existing Government Schools of Davanagere North Assembly Constituency.	2.00
1486	Karnataka	Davanagere	Providing additional infrastructure to existing Government Schools of Davanagere South Assembly Constituency.	1.60
1487	Karnataka	Davanagere	Construction of drain around Kundawada Lake from Glass House to Kundawada Lake side Bridge near Kundawada Lake West Gate and CC Road from Balaji junction to Kundawada Lake.	3.00
1488	Karnataka	Davanagere	Operation and Maintenance of 18 Nos. E-Toilets constructed under Phase-1 at 9 Locations for 3 years	0.50
1489	Karnataka	Davanagere	Construction of Community Toilets in Govt. School Premises Davanagere by Karnataka Integrated Urban Water Management and Investment Programme (KIUWMIP)-(KUIDFC) - Convergence with Davanagere Smart City Limited Phase - I	0.22
1490	Karnataka	Davanagere	Construction of Community Toilets in Govt. School Premises Davanagere by Karnataka Integrated Urban Water Management and Investment Programme (KIUWMIP)-(KUIDFC) - Convergence with Davanagere Smart City Limited - Phase II	0.22
1491	Karnataka	Davanagere	Construction of Community Toilets in Govt. School Premises Davanagere by Karnataka Integrated Urban Water Management and Investment Programme (KIUWMIP)-(KUIDFC) - Convergence with Davanagere Smart City Limited Phase III	0.25
1492	Karnataka	Davanagere	Construction of Community Toilets in Govt. School Premises Davanagere by Karnataka Integrated Urban Water Management and Investment Programme (KIUWMIP)-(KUIDFC) - Convergence with Davanagere Smart City Limited Phase - IV	0.17
1493	Karnataka	Hubballi- Dharwad	Rain Water Management	0.37
1494	Karnataka	Hubballi-	Solid Waste Management- Litter Free Zone	3.02

1495	Karnataka	Dharwad Hubballi-	Open Space Upgradation 1 - Tolankere	20.29
1496	Karnataka	Dharwad Hubballi-	Open Space Upgradation 3 - M.G. Park	13.13
1497	Karnataka	Dharwad Hubballi-	Open Space Upgradation 4 - Nehru Stadium	20.25
1498	Karnataka	Dharwad Hubballi-	ICT Package-1 Integrated Command Control Centre and Smart Solid Waste	43.93
		Dharwad	Management	
1499	Karnataka	Hubballi- Dharwad	Electric Crematorium	2.59
1500	Karnataka	Hubballi- Dharwad	Smart Toilet	1.01
1501	Karnataka	Hubballi- Dharwad	Hubballi Dharwad Smart City Limited Website	0.01
1502	Karnataka	Hubballi-	Smart Road - Package 1 Gokul Road	42.88
1503	Karnataka	Dharwad Hubballi-	Smart Road - Package 2 Market Roads	48.00
1504	Karnataka	Dharwad Hubballi-	Smart Road - Package 3 Other Connecting Roads	44.44
	Karnataka	Dharwad Hubballi-		
1505		Dharwad	Public Bicycle Sharing	8.50
1506	Karnataka	Hubballi- Dharwad	Basic Services to Urban Poor	31.14
1507	Karnataka	Hubballi- Dharwad	Redevelopment of Swimming Pool at Hubballi	2.41
1508	Karnataka	Hubballi- Dharwad	ICCC Building- Civil Interior	4.71
1509	Karnataka	Hubballi- Dharwad	Smart School	1.17
1510	Karnataka	Hubballi- Dharwad	Smart Healthcare	3.05
1511	Karnataka	Hubballi- Dharwad	SUPPLY AND INSTALLATION OF SANITARY NAPKIN VENDING MACHINE AND SANITARY NAPKIN INCINERATOR	0.20
1512	Karnataka	Hubballi- Dharwad	ICCC Building - Services	3.19
1513	Karnataka	Hubballi- Dharwad	ICCC Building - ICCC Room Interior	2.47
1514	Karnataka	Hubballi-	MG Park - Phase II	4.63
1515	Karnataka	Dharwad Hubballi-	Puzzle Parking with Smart Parking	4.60
1516	Karnataka	Dharwad Hubballi-	Unkal Lake Upgradation	14.83
1517	Karnataka	Dharwad Hubballi-	Basic Services to Urban Poor - Package 2	42.01
1518	Karnataka	Dharwad Hubballi-	Basic Services to Urban Poor - Package 3	31.91
1519	Karnataka	Dharwad Hubballi-	Chittaguppi Hospital Upgradation	23.57
1520	Karnataka	Dharwad Hubballi-	MSME Industrial Estate	15.62
		Dharwad		
1521	Karnataka	Hubballi- Dharwad	Desilting of Rajnalla, North	0.82
1522	Karnataka	Hubballi- Dharwad	Desilting of Rajnalla, South	0.77
1523	Karnataka	Hubballi- Dharwad	MSI - Centralized Data Centre at KMDS	12.20

1524	Karnataka	Hubballi- Dharwad	Renovation of Core Markets- Fish Market	6.00
1525	Karnataka	Hubballi- Dharwad	Smart Roads Package - 04	17.73
1526	Karnataka	Hubballi- Dharwad	Smart Roads Package - 05	31.38
1527	Karnataka	Hubballi- Dharwad	Smart Roads Package - 06	37.71
1528	Karnataka	Hubballi- Dharwad	Design, Supply, installation, erection testing and commissioning of digital display board including operation and maintenance for 5 years for Hubballi-Dharwad smart city limited turnkey	4.60
1529	Karnataka	Hubballi- Dharwad	Renovation of Core Markets - Janata Bazar	18.35
1530	Karnataka	Hubballi- Dharwad	Renovation of Core Markets - Benegeri Market	7.60
1531	Karnataka	Hubballi- Dharwad	Redevelopment of Unkal Market	2.30
1532	Karnataka	Hubballi- Dharwad	Redevelopment of MG Park- Toy Train	4.20
1533	Karnataka	Hubballi- Dharwad	Medar Oni- Dispensary	4.73
1534	Karnataka	Hubballi- Dharwad	Renovation of Core Markets - Old Hubli Market Package B Rehabilitation of kattas and Shops	0.76
1535	Karnataka	Hubballi- Dharwad	Renovation of Core Markets - Janata Bazar Package A Rehabilitation of 200 Kattas	0.30
1536	Karnataka	Hubballi- Dharwad	ESTABLISHMENT OF Q.C. LABORATORY	0.85
1537	Karnataka	Hubballi- Dharwad	Supply and Installation of CCTV poles	0.41
1538	Karnataka	Hubballi- Dharwad	Installation of Boom Barriers along HDBRTS corridor in Hubball	3.88
1539	Karnataka	Hubballi- Dharwad	Renovation of Glass House MG Park	1.50
1540	Karnataka	Hubballi- Dharwad	Swimming Pool Phase-2	3.88
1541	Karnataka	Hubballi- Dharwad	Redevelopment of Tolanakere Phase-2	4.18
1542	Karnataka	Hubballi- Dharwad	Basic Services to Urban Poor at Vani Vilas Junction, Hubballi.	13.43
1543	Karnataka	Hubballi- Dharwad	Supply and Installation of RFID readers	0.98
1544	Karnataka	Hubballi- Dharwad	Supply and installation of GPS trackers	0.04
1545	Karnataka	Hubballi- Dharwad	Design, Supply and Procurement of Mobile Library Van	0.25
1546	Karnataka	Hubballi- Dharwad	Design and Construction of enterance gate at KIMS	0.31
1547	Karnataka	Hubballi- Dharwad	Procurement of Solar Butterfly grid	0.05
1548	Karnataka	Hubballi- Dharwad	Installation of EPDM Flooring at tolanakere Lake	0.44
1549	Karnataka	Mangaluru	Retrofit Car Street areas of Sri Venkatramana Temple as Religious Zone	4.95
1550	Karnataka	Mangaluru	Community Level Facilities along with international swimming pool	22.18
1551	Karnataka	Mangaluru	Skill Development and Safety Training Centre	2.40
1552	Karnataka	Mangaluru	Conversion of all the lighting in government building into LED	2.23
1553	Karnataka	Mangaluru	Construction of Smart Bus shelter and E-Toilets in PAN City - Phase 1	4.75
1554	Karnataka	Mangaluru	Construction of under ground drainage in zone-4 Part-1 in ABD area	4.62

1555	Karnataka	Mangaluru	Smart Road – Improvements to Nehru Maidan Road from Clock Tower to AB Shetty Circle	6.92
1556	Karnataka	Mangaluru	Construction of Smart Bus Shelter and E-Toilets in PAN City - Phase 2	4.54
1557	Karnataka	Mangaluru	Implementation of Command and Control Center Components	17.12
1558	Karnataka	Mangaluru	Construction of Clock Tower at Clock Tower Junction	0.75
1559	Karnataka	Mangaluru	Construction of Under Ground Drainage in Zone IV part 2 and Zone III part 1 in ABD Area	8.77
1560	Karnataka	Mangaluru	Integrated Development of Kadri Park Area	9.33
1561	Karnataka	Mangaluru	Integrated Asset Management and Urban Property Ownership Record	4.88
1562	Karnataka	Mangaluru	100 percent Underground Drainage network in ABD Area - Package 3	2.68
1563	Karnataka	Mangaluru	100% Underground Drainage network in ABD Area - Package 4 (800 manholes)	19.00
1564	Karnataka	Mangaluru	Smart Road - Package 4	46.98
1565	Karnataka	Mangaluru	Smart Road - Package 6 part 1	30.00
1566	Karnataka	Mangaluru	Smart Road - Package 7 part 1 (part 2 project id KAR-MAN-105)	21.00
1567	Karnataka	Mangaluru	Smart Road - Package 9 - Construction of Pedestrian Plaza	5.93
1568	Karnataka	Mangaluru	Smart Road – Package 2	14.50
1569	Karnataka	Mangaluru	Construction of Command and Control Center Building	5.00
1570	Karnataka	Mangaluru	Implementation of E-smart schools in all government schools - Package 1 - Infrastructure	9.83
1571	Karnataka	Mangaluru	Implementation of E-smart schools in all government schools-Package 2 - ICT	3.33
1572	Karnataka	Mangaluru	Cost towards common data centre at KMDS, Bengaluru	12.20
1573	Karnataka	Mangaluru	Rehabilitation of Central Market	5.06
1574	Karnataka	Mangaluru	Interior works for Smart City office	0.60
1575	Karnataka	Mangaluru	Rejuvenation of Gujjarakere Lake for Rainwater harvesting recreation	2.94
1576	Karnataka	Mangaluru	Rejuvenation of Kavoor Lake for Rainwater harvesting recreation	6.94
1577	Karnataka	Mangaluru	Supply and installation of 37 bedded ICU at new super speciality block of first floor at Wenlock hospital premises	2.82
1578	Karnataka	Mangaluru	Upgradation of Wenlock Hospital - Infra works	4.59
1579	Karnataka	Mangaluru	Upgradation of Wenlock Hospital - 12 bedded OT 61 bedded post operative ward	23.00
1580	Karnataka	Mangaluru	Construction of additional floor at existing building of Lady Goschen hospital at Mangaluru	1.93
1581	Karnataka	Mangaluru	Upgradation of Mangala Stadium	5.87
1582	Karnataka	Mangaluru	Strengthening distribution system for implementing 24x7 water supply including 8 years 0 M to Mangaluru City - SCM Funds	114.00
1583	Karnataka	Mangaluru	Establishing Karnataka Urban Observatory Centre of Excellence at Bengaluru	1.00
1584	Karnataka	Mangaluru	Implementation of Command and Control Centre components Opex	10.91
1585	Karnataka	Mangaluru	Skill Development and Safety Training Centre - Training Part	2.35
1586	Karnataka	Mangaluru	UG Cabling at Mangaladevi & Monkey Stand road	3.78
1587	Karnataka	Mangaluru	Kadri Park Phase 2	4.50
1588	Karnataka	Mangaluru	Surface Lake Aeration Fountains at Gujjar Kere	0.41
1589	Karnataka	Mangaluru	Towards defered operation & maintainance cost	24.89
1590	Karnataka	Mangaluru	Towards deposit contribution to MCC for construction of Service Bus Stand at	2.20
1501	V 4 1	C1. i.e	State Bank	21.26
1591	Karnataka	Shivamagga	Smart Road from Ashoka Circle to Alkola Circle	21.36
1592	Karnataka	Shivamogga	Smart Roads- package 1- Area between BH road- Savalanga road and Kuvempu road	64.00
	Karnataka	Shivamogga	Development of Conservancies in Package-1	0.91
1593	Kamataka	SHIVAHIOSSA		
1593 1594	Karnataka	Shivamogga	Development of Conservancies in Package-2	1.54

1596	Karnataka	Shivamogga	Development of Conservancies in Package-4	3.32
1597	Karnataka	Shivamogga	Development of Conservancies in Package-5	9.62
1598	Karnataka	Shivamogga	Development of Tank mohalla park, No 7 in Shivamogga	0.41
1599	Karnataka	Shivamogga	Nehru Stadium Beautification	2.59
1600	Karnataka	Shivamogga	Canal Redevelopment -Phase 1- 700m length	8.90
1601	Karnataka	Shivamogga	Riverfront Development- Infrastruture works; pedestrian bridge, River front promenade, etc- North B	110.00
1602	Karnataka	Shivamogga	Development of Heritage Walk / Village	14.28
1603	Karnataka	Shivamogga	Development of Shivappa Nayaka Palace Infrastructure	17.50
1604	Karnataka	Shivamogga	Improvement of hole bus stop	0.56
1605	Karnataka	Shivamogga	Providing infrastructure for development of smart library	0.19
1606	Karnataka	Shivamogga	Development of SMART LIBRARY ICT interventions 4 locations	4.39
1607	Karnataka	Shivamogga	Development of Park opposite Family Welfare Hospital in malleshwara nagara, Shivamogga City	1.94
1608	Karnataka	Shivamogga	Development of Physical Infrastructure( interiors, HVSC, and others) for setting up of Command and co	3.72
1609	Karnataka	Shivamogga	APPOINTMENT OF LOCAL SYSTEM INTEGRATOR (LSI) FOR ESTABLISHMENT OF COMMON COMMAND AND CONTROL CENTRE	50.66
1610	Karnataka	Shivamogga	Development of Parks Malleshwar nagar park, Balrajurs road in shivamogga city	1.81
1611	Karnataka	Shivamogga	Development of Country Club Park (Park 1) in Shivamogga City	2.80
1612	Karnataka	Shivamogga	Development of Corporation Park (Park 17) in Shivamogga City	4.95
1613	Karnataka	Shivamogga	Development of Masthambika temple park, Park 03 in Shivamogga City	0.92
1614	Karnataka	Shivamogga	Development of Vinayaka Nagar park in Shivamogga City	0.60
1615	Karnataka	Shivamogga	Development of Parks Kote Road, Sheshadripuram, DC compound, Mission Compound, Gandhinagara park in Shivamogga City	1.77
1616	Karnataka	Shivamogga	UG Elelctrical Cablng in Smart Road Package 1 Area not included in MESCOM Scope -under convergence	14.63
1617	Karnataka	Shivamogga	Development of Smart Roads Package 2a-Area between Jail road -kuvempu road-savalanga road-100' ring road and canal front road	66.90
1618	Karnataka	Shivamogga	Development of Smart Roads Package 2b-Area between Jail road -kuvempu road-sagar road and canal front road	75.60
1619	Karnataka	Shivamogga	Development of Smart Roads Package 3a-Area between Savalanga road-100' ring road and balaraj urs road	55.55
1620	Karnataka	Shivamogga	Development of Smart Roads Package 3b-Area between Savalanga Road-Balaraj urs road-riverfront road-BH road	66.00
1621	Karnataka	Shivamogga	Improvement and Beautification of Private Bus Terminal	5.33
1622	Karnataka	Shivamogga	Centralized Architecture DC, DR setup by MSI at KMDS-SDC	8.90
1623	Karnataka	Shivamogga	Last Mile connectivity using Cycle track and Footpath - Development of Inner Ring Road from Laxmi talkies junction to NT Road 7.5 km	93.65
1624	Karnataka	Shivamogga	Smart Education in Govt Schools - Pan City, 35 school	8.50
1625	Karnataka	Shivamogga	Providing Smart Bus Shelters E- Toilet for PAN city 61 nos	11.40
1626	Karnataka	Shivamogga	Construction of MLCP with commercial complex	26.03
1627	Karnataka	Shivamogga	Street Art in the selected locations across the city	0.51
1628	Karnataka	Shivamogga	Modern Police information tourism kiosk	1.16
1629	Karnataka	Shivamogga	Conservation of Heritage Building - Corporation Main Building	2.00
1630	Karnataka	Shivamogga	Conservation of Heritage Building - Govt School adjacent to Karnataka Sanga and other buildings	3.58
1631	Karnataka	Shivamogga	Facelifting to Riverfront Cremetorium	5.02

1632	Karnataka	Shivamogga	Supply, Installation, commissioning and operation and Maintenance of Digital Display Boards	2.06
1633	Karnataka	Shivamogga	Conversion of Existing HT LT overhead system to underground cable system of smart road from Ashoka circle to Prof.Krishnappa Circle in Shivamogga City	3.22
1634	Karnataka	Shivamogga	Shifting of EXt AF 6 and AF 7 11 kv Feeders and Connected Transformers centers from Alkola Circle to Circuit House Circle in the jurisdiction of unit 7, CSD 3	0.07
1635	Karnataka	Shivamogga	New Line for HT LT line of AF 4 Feeder in Sagar main road from Alkola Circle to Private bus stand under smart city plan	0.06
1636	Karnataka	Shivamogga	Conversion of Existing overhead HT LT 11 KV LT Lines to UG cable in Unit-7 of CSD-3 under package-2 of smart city project Shivamogga in self finance scheme	19.50
1637	Karnataka	Shivamogga	Conversion of Existing HT LT overhead 11 KV LT lines to UG cable of MRS F1 Feeder from Bekkina kalmata to Kote Police Station road in unit-4 CSD-2 subdivision in Shivamogga City	6.98
1638	Karnataka	Shivamogga	Development of Freedom Multi utility space and its partial implementation	5.32
1639	Karnataka	Shivamogga	Supplying and Installation of Furniture to Covid 19 Hospital in Superspeciality Hospital of SIMS	0.50
1640	Karnataka	Shivamogga	Procurement of medical Equipment's to District Health and Family Welfare Department Shivamogga	0.98
1641	Karnataka	Shivamogga	Balance work in the First floor of Super specialty hospital of SIMS	4.50
1642	Karnataka	Shivamogga	Construction of Yoga Bhavana and other Amenities in Shivamogga City	4.50
1643	Karnataka	Shivamogga	Repair works in Government Tamil School and Government Science College, BH Road Shivamogga	0.10
1644	Karnataka	Shivamogga	Green Urbanization at selected Places in Shivamogga City	2.57
1645	Karnataka	Shivamogga	Supply,Installation ,Testng and commissioning of decorative oles at Freedom Multi utility space in Shivamogga City	0.20
1646	Karnataka	Shivamogga	Procurement, Supply, Installation of Automatic Nucleic Acid Extractor (RNA/DNA) & Testing Kits for VDL, Shivamogga	0.35
1647	Karnataka	Shivamogga	Providing & Fixing of Stone Trellis, Pergola, Mantapa, GRC & FRP Claddings, FRP Animal Sculptures etc., for Riverfront Development Project in Shivamogga City Under Shivamogga Smart City Ltd."	3.85
1648	Karnataka	Shivamogga	Providing & Fixing of Children Play & Wall Claimbing Equipments, Musical Fountain etc., for Riverfront Development Project in Shivamogga City Under Shivamogga Smart City Ltd."	2.28
1649	Karnataka	Shivamogga	Providing and laying MS/HDPE rising/ Distribution pipe, UGD works and construction of drain at LC 49 and LC 52 in shivamogga city.	4.30
1650	Karnataka	Shivamogga	Estimate for Conversion of Existing Over Head 11 KV/LT lines into Partial UG cable for Facilitating Railway Flyover	2.36
1651	Karnataka	Shivamogga	Construction of Partitions and storage and side units	0.14
1652	Karnataka	Shivamogga	Providing partitions in 2nd floor Netaji subash chnadrabose commercial complex, Shivamogga	0.31
1653	Karnataka	Shivamogga	Construction of Govt. PU college and Govt. PU Girls college, BH road Shivamogga	0.95
1654	Karnataka	Shivamogga	Replacement of existing overhead HT & LT line to underground cable system near the channel Ravindra Nagara and Rajendra Nagara, in Shivamogga City	0.58

1655	Karnataka	Shivamogga	Procurement of Patrolling Bikes to Police Department for emergency Response in Shivamogga	0.30
1656	Karnataka	Shivamogga	Procurement Of Smart E books And Cognitive Language Learning Platform & Content For Shivamogga Smart City With Periodic Updates For Three Years	0.91
1657	Karnataka	Shivamogga	Procurement of Delivery Van with Mandatory spares to mount the portable type of cable fault location detector equipment	0.40
1658	Karnataka	Tumakuru	Development of Two wheeler parking at FMC Road conservancy - On Street Parking Lots	0.48
1659	Karnataka	Tumakuru	Storm Water Drains	4.23
1660	Karnataka	Tumakuru	Intelligent Transport	4.69
1661	Karnataka	Tumakuru	Integrated City Management Control Centre, ICMCC	47.16
1662	Karnataka	Tumakuru	Smart Park- Tumakuru University Park	0.62
1663	Karnataka	Tumakuru	Smart Lounges and Information Kiosks at Amanikare Lake basin	0.32
1664	Karnataka	Tumakuru	Construction of Smart e-Toilets	0.17
1665	Karnataka	Tumakuru	Construction of GI Barbed Wire Fencing under High Tension Power Supply Lines for Planation in Tumakuru.	0.55
1666	Karnataka	Tumakuru	Dredging, Desilting, Lining, Restoration and Reclamation Works of Upstream Feeder Channels Canals to A	0.39
1667	Karnataka	Tumakuru	Construction of Chain Link Fencing with MS Gates and Provision for Security Camera & Lighting around Amanikere Lake Tumakuru	3.92
1668	Karnataka	Tumakuru	Development of Nursery for afforestation and green buffer zones at Amanikere	0.49
1669	Karnataka	Tumakuru	Rejuvenation and Redevelopment of Ring Road	58.96
1670	Karnataka	Tumakuru	Trauma Centre	41.43
1671	Karnataka	Tumakuru	50 KW-off-Grid Solar Photo Voltaic (SPV) System at GOVT.PU College	0.73
1672	Karnataka	Tumakuru	6KW centralized Off-Grid Solar Power Plant with LED based Solar street lighting system	0.32
1673	Karnataka	Tumakuru	Sports facility Center at PU College	0.38
1674	Karnataka	Tumakuru	Additional Class rooms Block at PU College	0.89
1675	Karnataka	Tumakuru	Construction of Toilet Block at NCC Campus	0.10
1676	Karnataka	Tumakuru	Redevelopment of Siddaganga Bus Shelter	0.07
1677	Karnataka	Tumakuru	Development of Intermediate Para Transit Stands at Kodi Basaveshwara Circle and MG Road	0.04
1678	Karnataka	Tumakuru	Development of Field Marshal Cariappa road as Smart road	4.28
1679	Karnataka	Tumakuru	Providing Toilet Block at PU College	0.10
1680	Karnataka	Tumakuru	City Library with Incubation Center	27.58
1681	Karnataka	Tumakuru	Rain Water Harvesting and Afforestation	5.00
1682	Karnataka	Tumakuru	Road Improvements Visual Improvements of Roads	41.50
1683	Karnataka	Tumakuru	Plantation of Medians	0.85
1684	Karnataka	Tumakuru	Construction of Sports Complex including Swimming Pool & Development of the MG Stadium	54.64
1685	Karnataka	Tumakuru	Housing with Basic Services for Urban Poor at Mariyamma Nagar	13.06
1686	Karnataka	Tumakuru	Apportionment towards GIS Software with KUIDFC	0.60
1687	Karnataka	Tumakuru	Intervention and Additional improvement for 24*7 Water Supply, SCADA system, KUWSandDB	18.61
1688	Karnataka	Tumakuru	Public Bicycle Sharing	2.10
1689	Karnataka	Tumakuru	Road Improvements in ABD area with Under Ground Ducting and Resurfacing Phase-2	85.94

1690	Karnataka	Tumakuru	Contribution towards improvement of Water Supply Scheme, under AMRUTH	14.00
1691	Karnataka	Tumakuru	Smart Road Package-1	27.99
1692	Karnataka	Tumakuru	Smart Road Package-3	19.67
1693	Karnataka	Tumakuru	Construction of Multi-Dimentional Auditorium with Library and Class	13.53
			Rooms at	
			Empress Govt. High School PU College	
1694	Karnataka	Tumakuru	Construction of Building for ICMCC	11.36
1695	Karnataka	Tumakuru	MSI Centralised Data Center at KMDS	12.20
1696	Karnataka	Tumakuru	Selection of Agency for Operation and Maintenance of Smart Lounge at Amanikere	0.89
1697	Karnataka	Tumakuru	Clearance of 05 nalas of Amanikere	0.18
1698	Karnataka	Tumakuru	Lake Bank Conservation Erosion Protection	25.37
1699	Karnataka	Tumakuru	Construction Development of Canopy walk, Weather station, Yoga Retreat	1.67
1700	Karnataka	Tumakuru	Pedestrian Environment Improvement and Public Place making at Govt. PU College Precinct	2.40
1701	Karnataka	Tumakuru	Development of Banyan Tree Boulevard	0.88
1702	Karnataka	Tumakuru	Smart Parking-IT Component	0.16
1703	Karnataka	Tumakuru	Signage and Liability-"You Are Here" Maps, Signage, Street Markings and Digital Display Boards	1.04
1704	Karnataka	Tumakuru	Supply, Installation of Litter Bins, Roll-on Containers and Sign Boards to make ABD area as Litter Free Zone	0.32
1705	Karnataka	Tumakuru	Smart Parking at MG Road Conservencies	0.33
1706	Karnataka	Tumakuru	Upparahalli Flyover Underspace Development	0.38
1707	Karnataka	Tumakuru	Proposed Womens Theme Park at Upparahalli, Ward No 24, Tumakuru	0.94
1708	Karnataka	Tumakuru	Supply and Installation of Firing Simulator and other Non-IT Infrastructure	0.11
1709	Karnataka	Tumakuru	Proposed Fitness Theme park at KASABA Ward no 3, Tumkauru	0.65
1710	Karnataka	Tumakuru	Construction of Conventional Public Toilet blocks - (4 Locations)	1.00
1711	Karnataka	Tumakuru	Development of Smart Bus Shelter -Phase 1, 5 Locations	0.38
1712	Karnataka	Tumakuru	Selection of Agency for Supply Development, Customization, Implementation and Support for Digital Library Solution at Typeslavay Control Library	1.71
1713	Karnataka	Tumakuru	Support for Digital Library Solution at Tumakuru Central Library Supply and Installation of Sanitary Napkin Vending Machine and Incinerator	0.01
1/13	Karnataka	1 umakuru	in Empress Girls High School and PU College	0.01
1714	Karnataka	Tumakuru	Smart Road Package 3B	44.45
1715	Karnataka	Tumakuru	Interior Works for Integrated City Management Command and Control Centre in	0.37
			Town Hall Building in Tumakuru	
1716	Karnataka	Tumakuru	Redevelopment of Ring Road Phase -2	52.50
1717	Karnataka	Tumakuru	Solar Panelling of Glass House at Amanikere	2.93
1718	Karnataka	Tumakuru	Science Theme Park at Amanikere	0.39
1719	Karnataka	Tumakuru	Solid Waste Management, IEC Activity	0.14
1720	Karnataka	Tumakuru	Intermediate Para Transit Stands (Auto Stands - Phase 2)	0.04
1721	Karnataka	Tumakuru	Smart Road Package-2 (6 roads - Mandipet Main Road, Mandipet 1st and 2nd Main Road, North Bus Stand Road(Gubbi Veeranna Kalamandir Road), South Bus Stand Road(KSRTC Depot Road), Bhagavan Mahaveer Jain Road, FMG Cariappa road)	32.72
1722	Karnataka	Tumakuru	Selection of Agency for Establishment of Digital Classrooms, ICT lab and Language labs at Govt. College and schools of Tumakuru, Call 2	2.26
1723	Karnataka	Tumakuru	Digital Nerve Centre - Health Care	4.27
1724	Karnataka	Tumakuru	Smart Lounge - Furniture	0.11
1725	Karnataka	Tumakuru	Energy Efficient Lighting - LED Lights for new extensions in the city	7.95
1726	Karnataka	Tumakuru	Skill Development Centre for NCC Cadets	0.42
1727	Karnataka	Tumakuru	ICMCC Phase 2	19.37

1728	Karnataka	Tumakuru	Utilization of Impounded Water in Tumakuru Amanikere by Pumping Water to the	13.78
			Existing 50MLD Capacity WTP in P.N.Palya	
1729	Karnataka	Tumakuru	Teacher and Student Resource Center	0.23
1730	Karnataka	Tumakuru	Skill on Wheels	0.31
1731	Karnataka	Tumakuru	Development of Park - Adarsh Nagar, Ward No 20	0.74
1732	Karnataka	Tumakuru	Development of Park - Kuvempu Nagar, Ward No 21	0.34
1733	Karnataka	Tumakuru	Development of Park - SS Puram, Ward No 25	0.29
1734	Karnataka	Tumakuru	Procurement and Installation of open Gym equipment and Children play equipment along with allied civil works in TCC limits	0.32
1735	Karnataka	Tumakuru	Construction of additional classrooms on existing old building	2.40
1736	Karnataka	Tumakuru	Construction of additional classroom - New building at Govt. PU college	0.77
1737	Karnataka	Tumakuru	Supply and Installation of Smart Poles at different places in Tumakuru	1.03
1738	Karnataka	Tumakuru	Development of Parking at 7 conservancies at SS Puram road in Tumakuru.	1.31
1739	Karnataka	Tumakuru	Plantation around Amanikere lake	0.58
1740	Karnataka	Tumakuru	Supply of UAV systems, Drone Procurement	0.22
1741	Karnataka	Tumakuru	Selection of Agency for establishment of Smart classrooms at different Govt.	0.70
1/41	Karnataka		Schools Colleges of Tumakuru	0.70
1742	Karnataka	Tumakuru	Development of Park - Amarajyothi Nagar	0.49
1743	Karnataka	Tumakuru	Development of Park - Mahalakshmi	0.42
1744	Karnataka	Tumakuru	Development of Park - Sapthagiri Park near Library	0.52
1745	Karnataka	Tumakuru	Development of Park - Jayanagar	0.55
1746	Karnataka	Tumakuru	Development of Park - Gokula Extension	0.45
1747	Karnataka	Tumakuru	Construction of 107 PIS boards at Bus Stands in Tumakuru	0.79
1748	Karnataka	Tumakuru	Development of Auto Stands -Phase 3	0.08
1749	Karnataka	Tumakuru	Construction of Public Toilet at Govt. PU College Ground.	0.57
1750	Karnataka	Tumakuru	CC Road + Entrance Gate at PU College	1.14
1751	Karnataka	Tumakuru	Development of Sports Arena at Govt. PU College Ground.	4.32
1752	Karnataka	Tumakuru	Locked House Monitoring System, LHMS	0.22
1753	Karnataka	Tumakuru	Supply, Installation of Furniture and Electrical work for DiNC for PHC - Tumakuru.	0.13
1754	Karnataka	Tumakuru	Repair works of Primary Health Center, 8 No's Buildings	0.86
1755	Karnataka	Tumakuru	Development of Madhuvana park, Sri.Shivakumar Swamiji park Devarayanapatna	1.24
1756	Karnataka	Tumakuru	park in Tumakuru.  Development of Kumtaiah Park in IDSMT layout Unni Krishnan Park in Sadashiva Nagar	1.20
1757	Karnataka	Tumakuru	Development of park at Batavadi Ward no 27, Pragathi Badavane Yadava Nagar ward no 29 in Tumakuru	1.23
1758	Karnataka	Tumakuru	Providing Printing, Framing, Installation of way finding signage "You Are Here" signage Board in Tumakuru.	0.53
1759	Karnataka	Tumakuru	Repair work of Private Bus Stand, Ward No 14 at Tumakuru	0.26
1760	Karnataka	Tumakuru	Repair works of Anganawadi Centers in Tumakuru City Corporation limits, Tumakuru	0.84
1761	Karnataka	Tumakuru	Development of Urban Haat at Amanikere Lake, in Tumakuru	1.57
1762	Karnataka	Tumakuru	Construction of Compound Wall at Govt. PU College Ground, Tumakuru	1.34
1763	Karnataka	Tumakuru	Procurement Installation of Gym Equipment's to SFC at Govt. PU College	0.42
1764	Karnataka	Tumakuru	Procurement and Installation of Furniture for Additional Classroom at Govt. PU College	0.05
1765	Karnataka	Tumakuru	Redevelopment of Bus Shelter at Different Locations in Tumakuru	0.21
1766	Karnataka	Tumakuru	Procurement of IT Hardware to Tumakuru City Corporation, TCC for E-Office	0.55
1767	Karnataka	Tumakuru	Construction of Administrative Office at Solid Waste Management unit at	0.09
1/0/			Ajjgondanahalli, Tumakuru.	

			Management unit at Ajjgondanahalli, Tumkur	
1769	Karnataka	Tumakuru	Installation of 02 no.s of Bore wells and pumps in Solid Waste Management	0.15
			unit at Ajjagondanahalli, Tumkur	
1770	Karnataka	Tumakuru	Installation of CCTV in Solid Waste Management unit at Ajjgondanahalli, Tumakuru.	0.14
1771	Karnataka	Tumakuru	Construction of Macadam Around the inner compound wall in solid waste management unit at Ajjgondanahalli, Tumkur.	0.08
1772	Karnataka	Tumakuru	Construction of Anganawadi centers in Tumakuru City Corporation limits, Tumakuru. Phase - I	2.11
1773	Karnataka	Tumakuru	Creation of Lighting Infrastructure on the Identified dark spot in 35 wards coming under TCC jurisdiction in Tumakuru City.	4.66
1774	Karnataka	Tumakuru	Procurement and Installation of Furniture for PU College Including Additional Classroom, Tumakuru	1.00
1775	Karnataka	Tumakuru	Supply, installation and erection of 65mtr high mast flag pole at Amanikere	1.02
1776	Karnataka	Tumakuru	Selection of System Integrator for Installation Commissioning and operation of Smart Infrastructure at selected parks in Tumakuru	3.23
1777	Karnataka	Tumakuru	Development of Park Package-4 - Gangotri Nagar and GSB park in Gangasandra	1.11
1778	Karnataka	Tumakuru	Development of Parks- Package 5- Municipal Layout SS Puram, Banajaru Bhavan Saraswathi Puram	0.96
1779	Karnataka	Tumakuru	Development of Parks- Package 6- Netaji Road (Bharathinagar) and Sajeevnagar 2nd cross	0.77
1780	Karnataka	Tumakuru	Shifting of BESCOM HT line and other infrastructure in CSD-1	0.39
1781	Karnataka	Tumakuru	Development Works at Vidyanagar Pumphouse	0.33
1782	Karnataka	Tumakuru	Construction of Model Anganawadi Building at Dibbur and one more location in Tumakuru	1.39
1783	Karnataka	Tumakuru	Supply and Installation of Lake Amenities along with allied works at Amanikere, Tumakuru	0.86
1784	Karnataka	Tumakuru	Providing, Installation and Commissioning of Garden Light poles along the bund of Amanikere, Tumakuru	1.93
1785	Karnataka	Tumakuru	Infrastructure correction in the existing lighting system in Tumakuru	2.58
1786	Karnataka	Tumakuru	Development of S S Circle Park Ward No - 19, Tumakuru.	0.60
1787	Karnataka	Tumakuru	Supply of Tractor mounted Boom Sprayer with boom and accessories besides mist blower to TCC at Tumakuru.	0.21
1788	Karnataka	Tumakuru	Purchase of ALS Ambulance to New Trauma Centre	0.54
1789	Karnataka	Tumakuru	Development of Park at TCC Premises	0.18
1790	Karnataka	Tumakuru	Development of Park at Amanikere Island	0.20
1791	Karnataka	Tumakuru	Development of Park at Siddarameshwara Extension	0.20
1792	Karnataka	Tumakuru	Development of Park at Sapthagiri Extension	0.18
1793	Karnataka	Tumakuru	Development of Park at PWD IB	0.20
1794	Karnataka	Tumakuru	Development of Street Vending Zones at Kothithopu Road Near SS Circle	0.33
1795 1796	Karnataka Karnataka	Tumakuru Tumakuru	Construction of Bus Shelter at 15 Locations in Tumakuru  Junction improvement to DC Office Circle in Tumakuru	1.47
1796	Karnataka	Tumakuru	Development of park near Panchamukhi Extension Antharasanahalli bypass Ward No.2 and Development of Azad Nagar Park in Ashoka Nagar Ward No.26	1.45
1798	Karnataka	Tumakuru	Procurement of Medical and other equipment's for RT-PCR Lab at District Hospital for COVID'19 Testig.	0.86

1799	Karnataka	Tumakuru	Development of Street vending zones at Kothithopu road near SS circle, Tumakuru Phase II	0.64
1800	Karnataka	Tumakuru	Construction of Vending Zones at Mariyamma Nagar, Tumakuru	2.05
1801	Karnataka	Tumakuru	Construction of Vending Zones at Jaya Nagar Bus stop, Shettihalli, Tumakuru	0.80
1802	Karnataka	Tumakuru	Construction of Vending Zones at Dhobi Ghat, Ashoknagar, Tumakuru	0.87
1803	Karnataka	Tumakuru	Supply of Uniforms for Tumakuru City Corporation Pourakarmikas	0.52
1804	Karnataka	Tumakuru	Package 8- Development of Nethaji Park Ward No. 21 and other parks in Tumakuru	1.45
1805	Karnataka	Tumakuru	Solid Waste Management - Construction of Land fill at Ajjagondanahalli Dumping site	3.49
1806	Karnataka	Tumakuru	Procure, Supply, Install & Commissioning of Furniture works to Multifunctional Auditorium at Empress Girls High School & PU College, Tumakuru	1.05
1807	Karnataka	Tumakuru	Construction of Stage with allied infrastructure works at PU College	1.45
1808	Karnataka	Tumakuru	Medical equipment's for Trauma Centre at district hospital, Tumakuru	2.15
1809	Karnataka	Tumakuru	ICU equipment's for Trauma Centre at district hospital, Tumakuru	2.42
1810	Karnataka	Tumakuru	Hospital plats to Trauma Centre at district hospital, Tumakuru	2.61
1811	Karnataka	Tumakuru	General Furniture & instrumemt's for Trauma Centre at district hospital, Tumakuru	2.00
1812	Karnataka	Tumakuru	Supply, Installtion and Commissioning of Lighting and its allied infrastructure at Govt. PU College, Tumakuru.	1.07
1813	Karnataka	Tumakuru	Creation of Lighting Infrastructure on the additional Identified dark spot in 35 wards coming under TCC jurisdiction - Phase 2	2.48
1814	Karnataka	Tumakuru	Construction of Box Culvert for Outlet crossing at Amanikere	2.10
1815	Karnataka	Tumakuru	Construction of 3 no's of Anganawadi Centres at different locations in Tumakuru - Phase 3	0.63
1816	Karnataka	Tumakuru	Construction of 3 no's of Anganawadi Centres at different locations in Tumakuru - Phase 4	0.62
1817	Karnataka	Tumakuru	Construction of diversion drain for sewage, sullage entering from Annethota inlet to Kothithopu drain at Amanikere - Phase 2	4.89
1818	Karnataka	Tumakuru	Development of Senior Citizen and Children play area with gym and children play equipment at Govt. PU College, Tumakuru	0.68
1819	Karnataka	Tumakuru	Procure, Install and commissioning of interiors and Furniture for City Central Library, Tumakuru	2.59
1820	Karnataka	Tumakuru	Installation of CCTV Cameras in Amanikere & Banyan Boulevard	0.24
1821	Karnataka	Tumakuru	Construction, Repair and Renovation of Public Toilets at various Locations	0.76
1822	Karnataka	Tumakuru	Supply, Installation and Commissioning of PLC based ,CBR-MMS Integrated Centralized Automatic Bacteriological Treatment Plant enabled with Online Comprehensive Analyzer and supply of Chemical & all associated civil, mechanical and electrical works	0.52
1823	Karnataka	Tumakuru	Revamping and Redevelopment of Musical Fountain at Amanikere	4.82
1824	Karnataka	Tumakuru	Construction of 2 no's of Anganawadi Centres at different locations in Tumakuru - Phase 5	0.40
1825	Karnataka	Tumakuru	Redevelopment of open area of Kyatsandra Govt. Primary School, Tumkur	0.40
1826	Karnataka	Tumakuru	Infrastructure Correction in Slum - Development of Road and Drains	2.65
1827	Karnataka	Tumakuru	Construction of Badminton Hall at SP Office Premises, Tumakuru	0.45
1828	Karnataka	Tumakuru	Wall Painting and Art Work Painting at Tumakuru City Corporation Limits	0.47
1829	Karnataka	Tumakuru	Development of Parks, DC office premises, Play Grounds, Installation of	15.05

			and Children play equipment and Junction improvement, Tumakuru	
1830	Karnataka	Tumakuru	Procure, Supply of 1 no. of Truck mounted Mechanical Sweeping Machine along with Operation and Maintenance period of 5 years for Tumakuru City Corporation, Tumakuru	3.56
1831	Karnataka	Tumakuru	Development of allied infrastructure at Fitness theme park, Tumakuru	0.22

 Table 4: Projects under Smart City Mission in Maharashtra.

SI No.	State	City	Project	Cost (Rs. Cr)
1	Maharashtra	Pimpri- Chinchwad	Streetscape including underground utilities, two Parks and Smart Toilets in ABD	247.00
2	Maharashtra	Pimpri- Chinchwad	City Mobile App and Social Media Analytics	18.60
3	Maharashtra	Pimpri- Chinchwad	ICT enable SWM	6.02
4	Maharashtra	Pimpri- Chinchwad	Streetscape including underground utilities, two Parks and Smart Toilets in ABD Phase 2, Phase-1 id MAH-PIM-058	24.00
5	Maharashtra	Pimpri- Chinchwad	Smart Sewerage	22.24
6	Maharashtra	Pimpri- Chinchwad	Public E-toilets	3.15
7	Maharashtra	Pimpri- Chinchwad	School Health Monitoring	3.15
8	Maharashtra	Pimpri- Chinchwad	Municipal E-Classrooms	6.79
9	Maharashtra	Pimpri- Chinchwad	Start-Up Incubation Centers	5.00
10	Maharashtra	Pimpri- Chinchwad	Skill Development Centers	5.00
11	Maharashtra	Pimpri- Chinchwad	Smart Kiosks	3.58
12	Maharashtra	Pimpri- Chinchwad	Optical Fibre Cable laying MAH-PIM-008	87.28
13	Maharashtra	Pimpri-	Community level composting	0.27

		Chinchwad		
14	Maharashtra	Pimpri- Chinchwad	Command control centre Phase 2 of project id MAH-PIM-007	6.35
15	Maharashtra	Pimpri- Chinchwad	Command and Control Centre	153.53
16	Maharashtra	Pimpri- Chinchwad	Environmental Monitoring	4.81
17	Maharashtra	Pune	Adaptive Traffic Management - Traffic Master Plan	1.62
18	Maharashtra	Pune	Governance and citizen engagement	5.00
19	Maharashtra	Pune	Road plantation	5.00
20	Maharashtra	Pune	Road painting	8.12
21	Maharashtra	Pune	Road and road widening - Baner street - 7.5 KM	38.47
22	Maharashtra	Pune	Smart Health	0.75
23	Maharashtra	Pune	Place making and Open spaces - PH2	31.56
24	Maharashtra	Pune	Sanitation	1.92
25	Maharashtra	Pune	Street furniture	7.86
26	Maharashtra	Pune	Road and road widening greenfield	153.81
27	Maharashtra	Pune	Road and road widening	75.88
28	Maharashtra	Pune	Low income skill development and healthcare - Smart schools	9.90
29	Maharashtra	Pune	Start Up	15.00
30	Maharashtra	Pune	Fire station	7.00
31	Maharashtra	Pune	Solid waste management	1.00
32	Maharashtra	Pune	Rainwater harvesting	9.80
33	Maharashtra	Pune	Express airport services	3.00
34	Maharashtra	Pune	100 Electric buses	45.00
35	Maharashtra	Pune	Bus ITMS	100.00
36	Maharashtra	Pune	Smart Element	155.00
37	Maharashtra	Pune	Place Making and Open spaces, Pilot	2.92
38	Maharashtra	Pune	Street Redesign 1.5 KM - pilot, Aundh area	22.90

39	Maharashtra	Solapur	Development of Burial Ground and Crematorium	19.51
40	Maharashtra	Solapur	Supply and Erection of Street Light Pole (RSJ) infrastructure Phase-2	5.59
41	Maharashtra	Solapur	Develop and Maintain the Indira Gandhi Stadium Phase-2 in Solapur	10.39
42	Maharashtra	Solapur	Appointment of Agency for carrying out Water Audit and Consumer Survey for Solapur City under Smart city mission	2.09
43	Maharashtra	Solapur	Develop and Maintain the Laxmi Market	10.07
44	Maharashtra	Solapur	Civil and Electrical work of 20 Smart Classrooms in Municipal Corporation Schools	0.11
45	Maharashtra	Solapur	Procurement of 30 Waste Collection Vehicles of 2.2 cum capacity through GeM	1.67
46	Maharashtra	Solapur	Procurement of dustbins for households Phase 2	0.96
47	Maharashtra	Solapur	Improvements to water distribution and sewerage system in ABD area	220.00
48	Maharashtra	Solapur	Development of place for exhibition	4.30
49	Maharashtra	Solapur	Appointment of Contractor for Procurement, Construction Maintenance of Priority Roads Package of 09m, 12m, 15m, 18m, 24m wide and total approximate length 10.818 kms	130.00
50	Maharashtra	Solapur	Procurement 30 Waste Collection Vehicles of 3.2 Cum capacity through GeM	1.67
51	Maharashtra	Solapur	Procurement 60 Waste Collection Vehicles of 2.2 Cum capacity through GeM	3.77

			communication plan and IEC strategy and providing implementation support for improvement of SWM	
53	Maharashtra	Solapur	Procurement of dustbins for households- SWM	0.98
54	Maharashtra	Solapur	Content Creation and Management for LED Video Walls at Ranga Bhavan Chowk	0.28
55	Maharashtra	Solapur	Civil works for installation of transfer station	2.89
56	Maharashtra	Solapur	Temporary Flow Measurments in the ABD Area of Solapur using Clamp on type Ultrasonic Flow Meters	0.32
57	Maharashtra	Solapur	Develop and Maintain the Hoam Ground Solapur	2.98
58	Maharashtra	Solapur	Appointment of contractor for carrying out works of Improvements to Water Distribution System	0.23

 Table 5: Projects under Smart City Mission in Telangana

Sl No.	State	City	Project	Cost (Rs. Cr)
1	Telangana	Greater Warangal	Shifting of 11KV & 33KV poles, LT lines & DTR located along the approach roads proposed at Grand Entrance Gate on Warangal-Khammam Highway	0.10
2	Telangana	Greater Warangal	Shifting of 11KV & 33KV poles, LT lines & DTR located along the approach roads proposed at Grand Entrance Gate on Warangal-Karimnagar Highway	0.19
3	Telangana	Greater Warangal	Shifting of 11KV & 33KV poles, LT lines & DTR located along the approach roads proposed at Grand Entrance Gate on Warangal-Narsampet	0.46

4	Telangana	Greater Warangal	Construction of two vent underground ductalomng the right side of the 100 ' REC-KUC Road from Oaracheruvu, Gopalpur (V) and joining the original stream at Presidency School Bridge on 80 feet Road	54.00
5	Telangana	Greater Warangal	Development of Cycle Track From Fathima Junction – Subedari Junction	2.00
6	Telangana	Greater Warangal	Landscaping works at 570M Bunds at Bhadrakali Temple	0.50

 Table 6: Projects under Smart City Mission in Andhra Pradesh

Sl No.	State	City	Project	Cost (Rs. Cr)
1.	Andhra Pradesh	Amaravati	Smart Wards in Amaravati	6.04
2.	Andhra Pradesh	Amaravati	E-Vehicles including charging infrastructure	0.57
3.	Andhra Pradesh	Amaravati	Smart Solid Waste Management	12.22
4.	Andhra Pradesh	Amaravati	River Front Development	23.00
5.	Andhra Pradesh	Amaravati	3D City Planning Management	9.67
6.	Andhra Pradesh	Amaravati	Amaravati Government Complex - Central Park	130.00
7.	Andhra Pradesh	Amaravati	Skill Development centre- Phase 2	6.56
8.	Andhra Pradesh	Amaravati	City Smart Duct Project Power, Fiber, City Gas	270.00
9.	Andhra Pradesh	Amaravati	Town Sports Hub - Phase 1	2.23
10.	Andhra Pradesh	Amaravati	Electronic Project Document Management System EPDMS E Measurement Book	4.54
11.	Andhra Pradesh Amaravati		Mana Amaravati Citizen Card App	12.32
12.	Andhra Pradesh	Amaravati	Amaravati Smart City Access Road	150.00

# Krishna River Basin Infrastructure

# Major and medium irrigation projects:

Though few major projects like Krishna delta were in existence prior to independence, planned development of water resources of Krishna basin started after independence. There are 76 Major and 135 Medium irrigation projects in the basin. Radhanagari, Ghod, Khadakwasla Stage-I, Vir Dam, Konya Dam, Tungabhadra, Bhadra, Ghataprabha Stage-I and Stage-II, Upper Krishna, Musi Project, Nagarjuna Sagar, Sri Sailam, P.D.Jurala and Prakashan Barrage are the major projects in the catchment areas of the river basin. Krishna Barrage, Kurnool Cuddaph Canal, Tungabhadra Right Bank Lower-Level Canal, Tungabhadra High Level Stage-I and Rajouli Bunda Diversion major projects and fifteen other minor irrigation project of Andhra Pradesh are in the catchment areas of the river basin. Similarly, Vijaynagar Channels, Vanivilas Sagar, Ghataprabha Stage-I and Stage-II, Tungabhadra RBC & LBC and Bhadra LBC Major Irrigation projects and 29 other medium irrigation projects of Karnataka are also in the catchment areas of the river basin. Neera RBC & LBC, Ghod, Vir, Radhanagari and Tulsi major irrigation projects and 39 other minor irrigation projects of Maharashtra are in the catchment areas of the river basin. (Source: Integrated Hydrological Data Book, 2012, CWC-New Delhi)

# Projects in the Upper Krishna Basin are described below:

- ✓ Krishna Major Irrigation Project: The Krishna major irrigation project is a completed irrigation project of Maharashtra having GCA, CCA & UIP values 103.556, 74 and 74 Th.ha. respectively. Associated water resources structures are Dhom dam and Kanher dam.Satara and Sangli districts are benifited by this project.
- ✓ Ghatprabha medium irrigation Project: The Ghatprabha Medium Irrigation project comprises of construction of earthen dam on the Ghatprabha river for irrigation and hydroelectric purpose with CCA 5.46 th. Ha., UIP 4.78 th.ha. and Ghatprabha Powerhouse with installed capacity of 8 MW.
- ✓ Upper Krishna project stage-I: Upper Krishna project stage-I is basically an irrigation project with GCA, CCA & UIP 549 ,425, and 458.89 th.ha respectively. The project provides water for irrigation to the drought prone areas of Bijapur, Bagalkot, Gulbarga and Raichur districts. A major part of Upper Krishna command is covered under the Narayanpur canals for which, the main supplementing storage would be at Almatti. The first stage of this project comprises of two components. i) Almatti dam across the Krishna river near Almatti village in Bagewadi taluk of Bijapur district; ii) Narayanpur or Upper Krishna Stage-I dam, across the Krishna River, at Narayanpur (downstream of Almatti dam) near Bachihal and Siddapur village in Muddebihal taluk of Bijapur district.

- ✓ **Upper Krishna project stage-II:** The 2nd stage of the project envisages raising FRL of Almatti Dam to 524.26 m for providing irrigation to more areas. District beniffited by this project are Bijapur, Gulbarga, Raichur and Bagalkot. The GCA, CCA & UIP of this project are 268.17, 197.12 and 226.69 respectively.
  - ✓ Malaprabha Major Irrigation Project: The Malaprabha major irrigation project envisages construction of Malaprabha Dam on the Malaprabha river of Krishna basin. Mysore district is benefited by this project. GCA, CCA & UIP of the Malaprabha major irrigation project are 344.77, 196.13 and 196.13 Th.ha. respectively.

### Projects in the Upper Tungabhadra Basin are described below:

- ✓ **Hippargi Irrigation Project:** It is a major ongoing irrigation project envisages construction of Hippargi barrage on the river Krishna in Karnataka state. Bagalkot and Belgaum districts are benefited by this project. GCA, CCA & UIP of the Hippargi major irrigation project are 93.427, 59.69 and 59.69 Th.ha. respectively.
- ✓ Tungabhadra Right Bank High Level Canal Stage-I & II (Andhra Pradesh) and Tungabhadra Right Bank High Level Canal (Karnataka): Stage I of the Major irrigation project is completed and stage II is ongoing. Associated water resource structure is Tungabhadra dam. CCA & UIP of the major irrigation project are 214.27 and 214.27 Th.ha. respectively.
- ✓ Tungabhadra Right Bank Low Level Canal (Karnataka, Andhra Pradesh): Tungabhadra Right Bank Low Level Canal is a completed major irrigation project with associated Tungabhadra dam. CCA & UIP of the major irrigation project are 98.60 and 98.60 Th.ha. respectively.
- ✓ Tungabhadra Left Bank Low Level Canal (Karnataka): Tungabhadra Left Bank Low Level Canal is a completed major irrigation project with associated Tungabhadra dam. CCA & UIP of the major irrigation project are 244.20 and 244.20 Th.ha. respectively.

#### Projects in Middle and Lower Krishna Basin:

- Jawahar (Nettampadu) Lift Irrigation Project: The Jawahar Nettempadu Lift Irrigation Scheme (JNLIS) envisages lifting of 21.425 TMC of water from the foreshore of PJP Reservoir to create irrigation for 0.81 Lakh Ha (2.00 lakh acre) in the drought prone upland areas of Gadwal and Alampur constituencies covering about 148 villages in 8 mandals besides providing drinking water facilities en-route the canal in Mahabubnagar district.
- Jurala (Priyadarshini) Major Irrigation Project: The Jurala Project is situated about 10 km from Kuravapur, Mahbubnagar district, Telangana, India. It is constructed on the

Krishna river. The Kurvapur Kshetra River is merging with water of the Joorala Project. The Jurala has a full reservoir level of 1045 ft and has a full capacity of 11.94 TMC. The project helps to irrigate 1,04,774 acres through Left and Right main canals in Mahabubnagar district. The project also generates 234 MW of electricity utilizing surplus water.

- Mahathma (Kalwakurthy) Lift Irrigation Project: Kalwakurthy Lift Irrigation Scheme, renamed as Mahatma Gandhi Kalwaurthy Lift Irrigation Project is an ongoing project and will provide irrigation to 1.38 Lakh Ha (3.40 lakh acre) and drinking water to the chronicall drought prone upland areas in Mahabubnagar District covering about 303 villages in erstwhile taluks of Kollapur, Nagarkurnool, Achampet, Jadcherla and Kalwakurthy, now comprising 19 Mandals. 25 TMC of water is proposed to be liftef to a total height of 298 m in 3 stages from the foreshore of Srisailam reservoir at Regumangadda, Yellur (V), Kollapur(M) from level +244.40 m to +502.00 m to irrigate an ayacut of 1.38 Lakh Ha (3.40 Lakh acre). The Government have sanctioned Rs.2990 Cr. to take up execution of works of the scheme.
- Nagarjuna Sagar Irrigation project: Nagarjuna Sagar Project is the largest and highest masonry dam in the world built between Nalgonda district of Telangana and Guntur district of Andhra Pradesh. It has a gross storage capacity of 312 TMC at FRL. The Project intends to provide irrigation facilities to an extent of 6.6 Lakh in Telangana and Feeding of tanks in the command area at the time of need, 1.3 lakh acres in AP under Left Main Canal (Lal Bahadur Canal) and 9.7 lakh acres in AP under Right Main Canal (Jawahar Canal). It also provides drinking water to urban & rural areas along the canal system. It also meets the water demands of twin cities of Hyderabad and Secunderabad. In addition to the above, 960MW Power Generation set up at Nagarjuna Sagar
- Rajiv Bhima Lift Irrigation Project: It is an ongoing major lift irrigation project in Telangana state with a Culturable Command Area (CCA) of 96.647 th ha and Ultimate Irrigation Potential (UIP) area of 83.78 th ha. This project is important for chronically drought affected upland areas of Makthal, Maganur, Atmakur, Narva, China Chintakutna, Devarakadra, Kothakota, Peddamandadi, Addakula, Wanaparthy, Pebbbair, Pangal, Weepangandla, Koderu and Kollapur Mandals of Mahabubnagar District.
- Srisailam Left Bank Canal Major Irrigation: Srisailam Left Bank Canal Project is a major irrigation project on Krishna River located in Nalgonda district of Telangana. The CCA & UIP of the major irrigation project are 149.79 and 149.79 Th.ha. respectively.
- Krishna Barrage: The Krishna Barrage also known as Prakasam Barrage was constructed during 1954 to1957 on Krishna River near Vijayawada City in Krishna District of Andhra Pradesh, below the confluence of the Musi. It is a major irrigation project and districts such as Krishna, West Godavari, Guntur, and Prakasam gets benefitted from this project. The CCA & UIP of Krishna Barrage is 422 and 529.34 Th.ha. respectively.

- Kurnool Cuddapah Canal Major Irrigation Project: Kurnool Cuddapah Canal Major Irrigation Project is a completed major irrigation project on Krishna River at Andhra Pradesh. It is a diversion type project with CCA and UIP of 146 and 112.505 th ha. Prople from Mahbubnagar, Kurnool and Y.S.R districts gets benefited from this project.
- **Rajolibanda Irrigation Project**: Rajolibanda Irrigation Project is a medium irrigation project on Tungabhandra River at Telangana state. The project has CCA of 47.21 th ha and UIP of 35.41 th ha. Mahbubnagar district gets benefitted from this project.
- Tarakarama Krishnaveni Lift Irrigation Project: Tarakarama Krishnaveni Lift Irrigation Project is a storage type major irrigation project on Krishna River with a CCA and UIP of 22.66 th ha and 22.66 th ha respectively. It is situated at Krishna district of Andhra Pradesh state and benefiting the people of Krishna district. Some of medium irrigation projects along Krishna River Basin are as shown below.

**Table 7:** Medium irrigation projects in Krishna River Basin.

Sl No.	Project Name	Location	Culturable Command	Ultimate Irrigation	Gross Storage	Live	<b>Benefitting Districts</b>
			Area (Th ha)	Potential	Capacity	Storage Capacity	
				(Th ha)	(MCM)	(MCM)	
1	Dindi Medium	Nalgonda,	5.19	5.19	69.125	69.125	Nalgonda and
	Irrigation Project	Telangana					Nagarkurnool
2	Musi Medium	Nalgonda,	16.59		136.48	130.26	Nalgonda
	Irrigation Project	Telangana					
3	Pakhal Medium	Warangal	9.07	9.07	95.9	95.2	Warangal
	Irrigation Project	district,					
		Telangana					
4	Wyra Medium	Khammam,	7.04	7.04	70.14	59.45	Khammam
	Irrigation Project	Telangana					
5	Bhama Askheda	Pune district,	44.17	44.17	241.69		Pune district
	Major Irrigation	Maharashtra					
	Project						
6	Bhima Sina Link	Solapur district,	11.8	11.8			Solapur
	Canal Lift Irrigation	Maharashtra					
	Project						
7	Gunjawani Major	Maharashtra	21.39	21.39	104.69	104.48	Pune
	Irrigation Project						
8	Krishna Koyna Lift	Maharashtra	172.47	117.33			Sangli and Belgaum
	Irrigation Project						
9	Kukadi Major	Maharashtra	205	146.05	1054	864	Pune, Ahmednagar, and
	Irrigation Project						Solapur
10	Nira Deoghar	Maharashtra	62.7	60.58	337.39	332.13	Satara, Solapur, and Pune
	Major Irrigation						
	Project						

## • Hydro Electric projects:

The Krishna basin has total 30 hydroelectric projects. The Hydro-electric schemes presently in operation in the basin are Srisailam Hydroelectric Project (900 MW Srisailam Left bank Power House), Nagarjunasagar Hydroelectric Project (815.6 MW Nagarjunasagar Power House), Almatti Hydroelectric Project (275 MW Almatti II Power House), Priyadarshini Jurala Hydroelectric Project (234 MW Priyadarshini Jurala Project Power House), Pulichintala Hydroelectric Project (120 MW Pulichintala Project Power House) etc.

Dams, Barrages/Weirs/Anicuts Water resources structures are manmade structures to store the water for hydropower, irrigation, drinking water supply etc. So far nearby 855 Nos. of structure (Dams/Barrages/Weirs/Anicuts and lifts) is constructed providing irrigation, diversion, storage purpose and other facilities in the basin. The dependable yield for the basin is utilized under number of major, medium and minor irrigation projects of the basin. Irrigation is being carried out in the area under these projects viz., dams, barrages, diversion structures and other lift irrigation systems. There are 660 Dams, 12 Barrages, 58 Weirs, 6 Anicuts and 119 lifts are situated in the Krishna. Majority of dams (81.36%) have storage capacity below 25 MCM (Figure 6). Around 90% dams are used for the purpose of irrigation. The longest dam in the basin is Narayanapura Dam on Ghataprabha river in Belgaum District of Karnataka with a total length of 10.64 km and height 29.72 m. Srisailam (N.S.R.S.P) Dam, the highest in the basin is located in Kurnool district of Andhra Pradesh on river Krishna with a height of 145 meters. Major dams in the basin are Priyadarshini Jurala / Jurala Dam, Srisailam (N.S.R.S.P) Dam, Nagarjuna Sagar Dam, Hidkal Dam, Arsoli Dam and Budhpur Dam etc. Srisailam Dam is constructed across the Krishna River at Srisailam in the Kurnool district in the state of Andhra Pradesh in India and is one of the 12 largest hydroelectric projects in the country. (GSC, LSC, structure Length, capacity of power house) of Krishna basin.

**Table 8:** Sub-Basin-wise number and type of water resource structures. *Source: IWRIS, Krishna Basin 2014.* 

S.no.	Sub-basin	Dams	Barrages	Weirs	Anicuts	Lifts	Powerhouse
			_				
1	Bhima lower	68	5	0	0	2	0
2	Bhima upper	273	0	1	0	30	9
3	Krishna lower	29	2	0	2	1	4
4	Krishna middle	34	0	0	0	8	4
5	Krishna upper	188	4	57	0	61	10
6	Tungabhadra lower	37	0	0	3	4	3
7	Tungabhadra upper	31	1	0	1	13	5

## • Interstate Projects:

Irrigation projects which are Interstate projects in Krishna basin are listed below.

- ✓ Rajolibandh Interstate Project (Rajolibanda Irrigation Project Andhra Pradesh).
- ✓ Tungabhadra Interstate Project (Tungabhadra High Level Canal Stage I Irrigation Project Andhra Pradesh).
- ✓ Tungabhadra Interstate Project (Tungabhadra Low Level Right Bank Canal Major Irrigation Project Andhra Pradesh).
- ✓ Dudhganga Interstate Project (Dudhganga Major Irrigation Project Karnataka)
- ✓ Rajolibandh Interstate Project (Rajolibanda Irrigation Project Karnataka).
- ✓ Tungabhadra Interstate Project (Tungabhadra Right Bank High Level Canal Major Irrigation Project Karnataka).
- ✓ Tungabhadra Interstate Project (Tungabhadra Left Bank Canal & Dam Major Irrigation Project).
- ✓ Tungabhadra Interstate Project (Tungabhadra Right Bank Low Level Canal Major Irrigation Project Karnataka).
- ✓ Dudhganga Interstate Project (Dudhganga Major Irrigation Project Maharashtra).

## Hydroelectric projects which are Interstate projects in Krishna basin are listed below.

- ✓ Tungabhadra Hydroelectric Project (Tungabhadra Hydroelectric Project)
- ✓ Tungabhadra Hydroelectric Project (Hampi Hydroelectric Project)

## Water Supply Network Plan

#### • Water source management:

The Krishna River Basin, spanning Maharashtra, Karnataka, Telangana, and Andhra Pradesh, plays a crucial role in water resource management, supporting agriculture, drinking water supply, industry, and hydropower generation. The basin relies on both surface and groundwater resources, with major tributaries such as the Bhima, Tungabhadra, Koyna, Ghataprabha, Malaprabha, and Musi contributing to water availability. Several large dams and reservoirs, including Almatti, Srisailam, Nagarjuna Sagar, and Ujjani, regulate water storage, irrigation, and hydropower generation. Groundwater is extensively utilized for irrigation and drinking purposes, especially in drought-prone areas, leading to concerns about over-extraction and depletion. Water management strategies in the basin focus on irrigation efficiency, inter-state water sharing agreements, and conservation initiatives such as watershed management, afforestation, and rainwater harvesting. The Krishna Water Disputes Tribunal plays a key role in ensuring equitable water distribution among the riparian states, addressing conflicts over water allocation. Sustainable management practices, along with policies for groundwater regulation and pollution control, are essential to maintaining the long-term viability of water resources in the Krishna Basin.

#### • Status of Water treatment plants:

The state of Telangana has made remarkable progress in water supply initiatives through Mission Bhagiratha. This ambitious project aims to provide safe drinking water at a rate of 100 liters per capita per day (LPCD) in rural areas, 135 LPCD in municipalities, and 150 LPCD in municipal corporations. Mission Bhagiratha comprises the construction of 123 Water Treatment Plants (WTPs), 77 intake structures, 1,804 major structures, and 35,716 rural Overhead Service Reservoirs (OHSRs). The total length of the pipeline network spans approximately 1.5 lakh kilometers. The Krishna and Godavari rivers serve as the primary sources of water for this project. It benefits a population of around 2.72 crore people across 32 districts in Telangana. As per Jal Jeevan Mission report, 73.82% of household in Andhra Pradesh provided with tap water connection. In Maharashtra state a total of 87.88% of households were connected with tap water connection.

## **Sewerage and Drainage Network Plan:**

The Sewerage and Drainage Network Plan in the Krishna River Basin is essential for managing wastewater, preventing pollution, and ensuring public health and environmental sustainability. The basin covers parts of Maharashtra, Karnataka, Telangana, and Andhra Pradesh, with major urban centers such as Pune, Hyderabad, Vijayawada, and Bengaluru requiring well-structured sewerage and drainage systems. Many cities in the basin have underground sewerage networks connected to Sewage

Treatment Plants (STPs), which help treat wastewater before discharge into rivers or for reuse in irrigation and industrial processes. Cities like Hyderabad and Vijayawada have advanced treatment facilities, while smaller towns and peri-urban areas still rely on decentralized sewage treatment solutions such as septic tanks and community-based wastewater treatment systems.

The drainage network in the basin is designed to manage stormwater runoff and prevent urban flooding, particularly during the monsoon season. Major cities have developed stormwater drainage systems, but many rural and semi-urban areas still face waterlogging issues due to poor drainage infrastructure. The Krishna River and its tributaries also receive untreated sewage and industrial effluents in some regions, raising concerns about water pollution and ecosystem degradation.

#### • Status of STPs in the Krishna River Basin:

The Krishna River Basin, spanning Maharashtra, Karnataka, Telangana, and Andhra Pradesh, has numerous Sewage Treatment Plants (STPs) that play a crucial role in wastewater management, preventing pollution, and maintaining river health. Major urban centers within the basin, including Pune, Hyderabad, Vijayawada, and Bengaluru, have well-established sewage treatment infrastructure, while smaller towns and rural areas still rely on traditional septic systems or have limited treatment facilities.

As per the CPCB report on the National Inventory of Sewage Treatment Plants (STPs), 2021, the status of STPs in the Krishna River Basin has been outlined below on a state-wise basis.

#### a. STPs at Karnataka:

Estimated sewage generation for the State of Karnataka is 4,458 MLD and total capacity (including proposed) is 2,712 MLD (140 STPs). Figure below depicts sewage generation, treatment capacity, operational capacity, actual utilization, complied capacity, capacities of non operational STPs, under construction STPs and proposed STPs. Based on data analysis, following observations are made:

- 1. Installed capacity is 2,712 MLD (60.83 %) against sewage generation of 4,458 MLD. It shows that there is gap of 1,746 MLD (39.17 %) in treatment capacity.
- 2. Out of 2,712 MLD of installed capacity developed, operational capacity is 1922 MLD (70.87 %).
- 3. Actual utilized capacity is 1786 MLD (92.92 %) and further, capacity of complied STPs is only 1168 MLD.
- 4. STPs based on SBR, OP and ASP technologies are predominant.

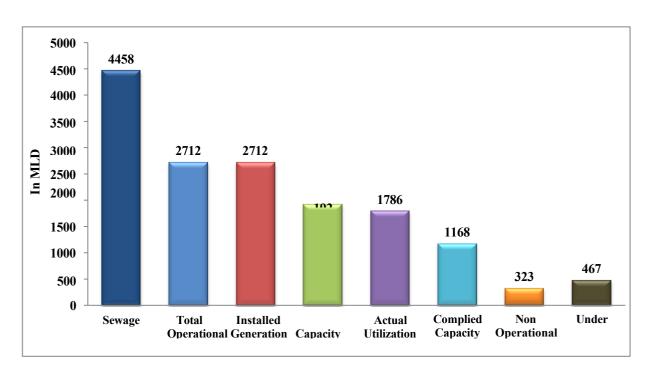


Figure 4: Sewage Generation and Treatment Capacity (MLD) – Karnataka

#### b. STPs at Maharashtra:

Estimated sewage generation for the State of Maharashtra is 9,107 MLD and total capacity (including proposed) is 9,819 MLD (195 STPs). Figure below depicts sewage generation, treatment capacity, operational capacity, actual utilization, complied capacity, capacities of non operational STPs , under construction STPs and proposed STPs . Based on the data, following observations are made:

- 1. Installed capacity is 6,890 MLD (75.65 %) against sewage generation of 9,107 MLD. It shows that there is gap of 2217 MLD (24.35 %) in treatment capacity.
- 2. Out of 6,890 MLD of installed capacity developed, operationalized capacity is 6,366 MLD (92.39 %) and actual utilized capacity is 4,242 MLD. Further, the capacity of complied STPs is only 3598 MLD.

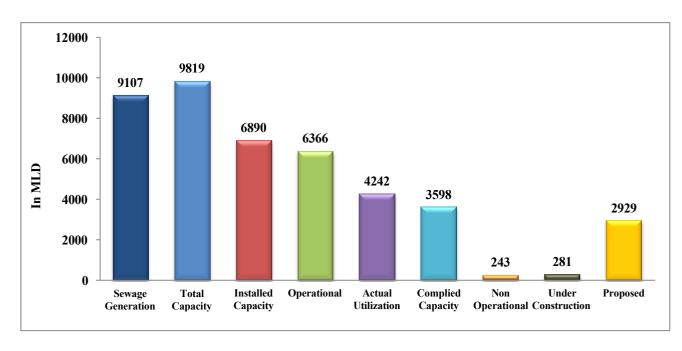


Figure 5: Sewage Generation and Treatment Capacity (MLD) – Maharashtra

#### c. STPs at Andhra Pradesh:

The estimated sewage generation in the state of Andhra Pradesh is approximately 2882 million liters per day (MLD). The total sewage treatment capacity, including both existing and proposed infrastructure, is 853.05 MLD, distributed across 67 Sewage Treatment Plants (STPs). Figure 4.1 illustrates various aspects such as sewage generation, treatment capacity, operational capacity, actual utilization, compliance status, non-operational units, ongoing construction, and proposed projects. Based on the data analysis, the following key observations can be made:

- 1. Currently, the state has an installed capacity of 833 MLD, which accounts for only 39.61% of the total sewage generated. This indicates a treatment capacity gap of 2049 MLD (71.09%).
- 2. Out of the 833 MLD installed capacity, only 443 MLD (53.18%) is operational.
- 3. The actual utilized capacity is 309 MLD, while the capacity of STPs compliant with prescribed norms is merely 154 MLD
- 4. STPs based on Activated Sludge Process (ASP) and Moving Bed Biofilm Reactor (MBBR) technologies are more prevalent compared to natural treatment systems. However, STPs employing natural treatment methods demonstrate over 50% compliance with regulatory standards, which is relatively higher.

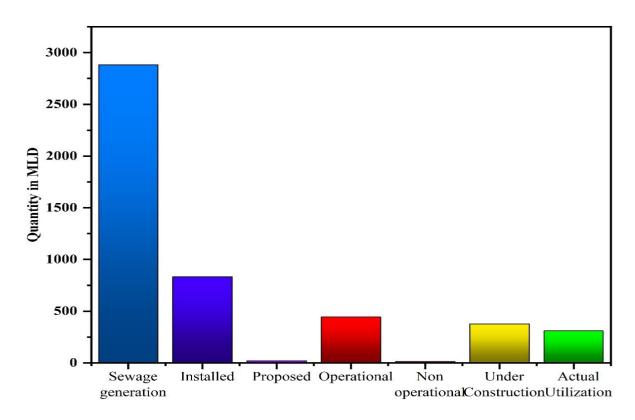


Figure 6: Sewage Generation and Treatment Capacity (MLD) – Andhra Pradesh

#### d. STPs at Telangana:

The estimated sewage generation in the state of Telangana is approximately 2,660 million liters per day (MLD). The total sewage treatment capacity, including both existing and proposed infrastructure, stands at 901 MLD, distributed across 37 Sewage Treatment Plants (STPs). Figure illustrates various aspects such as sewage generation, treatment capacity, operational capacity, actual utilization, compliance status, and the capacities of non-operational, underconstruction, and proposed STPs. Based on the analysis, the following key observations can be made:

- 1. The total installed capacity is 901 MLD, which accounts for only 33.87% of the total sewage generated. This indicates a significant treatment capacity gap of 1,759 MLD (66.13%).
- 2. Of the 901 MLD installed, 842 MLD (93.45%) is operational. However, the actual utilized capacity is 706 MLD, and only 637 MLD of this is from STPs that are compliant with prescribed environmental norms.
- 3. STPs utilizing Activated Sludge Process (ASP) and Moving Bed Biofilm Reactor (MBBR) technologies are more common compared to natural treatment systems.

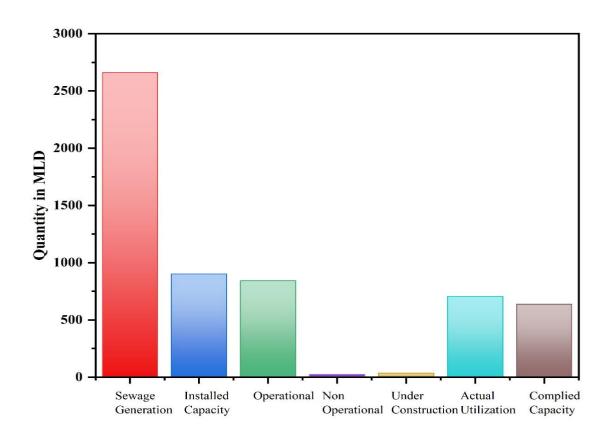


Figure 7: Sewage Generation and Treatment Capacity (MLD) – Telangana

## **Solid Waste Generation**

The functional elements of the Solid Waste Management (SWM) system in the Krishna River Basin include several key processes. It begins with waste generation, followed by waste handling and separation at the source, ensuring the proper waste categorization for further processing. The next step is collection, where waste is gathered efficiently for treatment. This is followed by separation, processing, and transformation, wherein the waste is treated or converted into usable forms. After processing, waste undergoes transfer and transport to designated facilities for final treatment or disposal. Lastly, disposal involves various methods such as discarding, destroying, processing, recycling, reusing, or controlling wastes to minimize environmental impact.

The types and sources of waste in the Krishna River Basin are explained below:

## • Municipal Solid waste:

#### ✓ Current Status of Solid waste Management in Karnataka:

In recent years, India's Municipal Solid Waste Management (MSWM) crisis has persisted due to the country's rapidly growing population, densely populated urban areas, diverse cultural practices, evolving dietary habits, and changing lifestyles. Consequently, towns and cities face numerous challenges in the collection, handling, and disposal of solid waste. This section presents a comprehensive analysis of the current state of SWM in the Krishna Basin, highlights key challenges associated with waste management, and explores potential solutions to address these issues effectively.

The Karnataka State Pollution Control Board (KPSCB), is fortifying scientific MSW management in Karnataka by enforcing the SWM Rules 2016. About 11,044 Tonnes per day (TPD) of MSW is generated in the state, of which 50-55% is wet/organic waste, 30-35% is dry waste and 10-20% is C&D and inert wastes. By 2031, the municipal SW generation in Bengaluru alone is projected to exceed 13,000 TPD. The SWM Rules2016, 4(a)mandates door-to-door collection, proper segregation, transportation and disposal of SW in all the ULBs. Most of the districts have successfully achieved a high percentage of door-to-door collection and some local bodies have adopted strategies such as pipe composting, community composting for efficient management of segregated wet waste. Muncipal Solid waste generation in Karnataka state district wise are as follows:

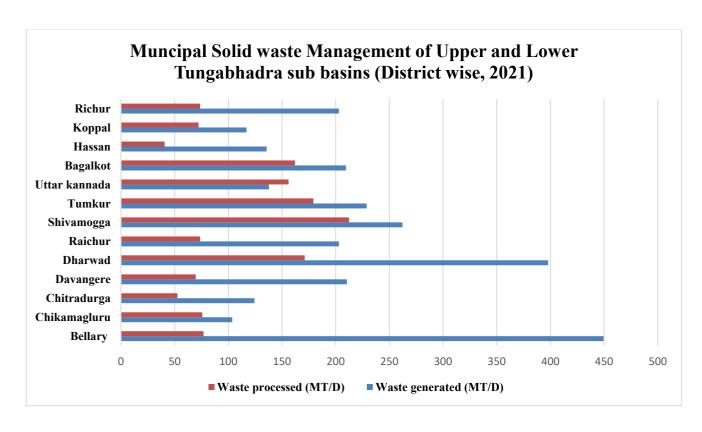


Figure 8: Municipal solid waste generated in the districts of Karnataka.

#### ✓ Current Status of Solid waste Management in Maharashtra:

Total 19980.22 MT/Day Solid Waste is treated/processed by ULBs by adopting waste treatment technologies and total 2066.64 MT/Day is disposed of in sanitary/simple landfill. Thus, achieving overall 93.69 % average treatment. The remaining solid waste find its way for unscientific disposal/dumping. Overall average waste segregation is 92.90% and overall solid waste transportation is 98.95 %.

The state has positively adopted the SWM Rules 2016 in totality and is working towards scientific management of solid waste in ULBs of the state. The state has a robust solid waste management policy in accordance with the Solid Waste Management Rules 2016 and lays stress on 100% segregation, collection transportation & processing of wet waste through composting, bio-methanization etc, Dry waste recycling, reuse and recovery through establishing Material Recovery facilities, Landfilling of inert, Processing of legacy waste through biomining. ULBs are practicing segregation of waste at source and adequate provisions are made in Solid Waste Management DPRs for achieving 100% segregation of waste at source. ULBs in state are segregating waste into three categories wet, dry and domestic hazardous waste. Muncipal Solid waste generation in Karnataka state district wise are as follows:

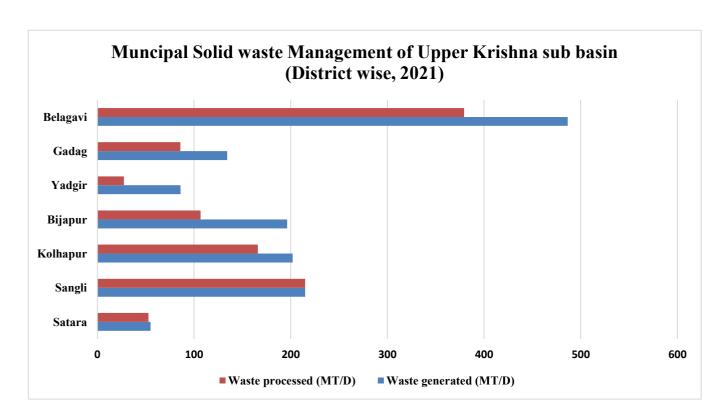


Figure 9: Municipal solid waste generated in the districts of Maharashtra.

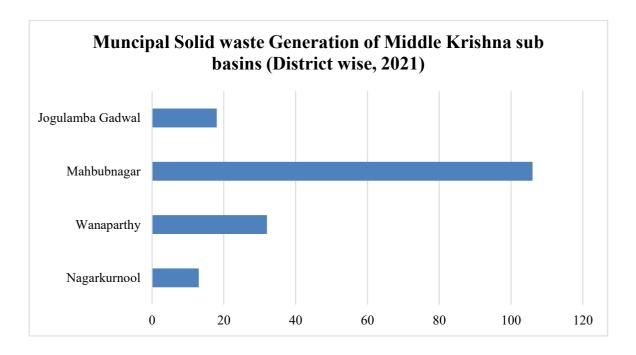
#### ✓ Current Status of Solid waste Management in Telangana State:

Telangana State comprises 142 Urban Local Bodies (ULBs), collectively generating 11,057 tonnes per day (TPD) of municipal solid waste (MSW). The entire quantity of waste generated is collected daily. Of this, 8,611 TPD is treated, 1,011 TPD is disposed of in sanitary landfills, and the remaining waste is discarded in open landfills.

House-to-house collection of MSW has been implemented in all ULBs across the state, covering 100% of households. Additionally, 63% of households are covered under source segregation. Municipal solid waste is transported using covered vehicles and trucks. The Greater Hyderabad Municipal Corporation (GHMC) has further advanced waste management by introducing compactors for waste collection and transportation from secondary transfer stations.

To support waste treatment efforts, 229 compost plants and Dry Resource Collection Centers (DRCCs) have been established in all 142 municipalities. Telangana also hosts one operational waste-to-energy plant in Jawaharnagar, generating 24 MW of power, with six other waste-to-energy plants in various stages of operation.

The GHMC has developed and operates a sanitary landfill facility. Across the state, there are 151 dumpsites, of which one has been successfully reclaimed, reflecting efforts toward sustainable waste management.



**Figure 10:** Municipal solid waste generated in the districts of Telangana.

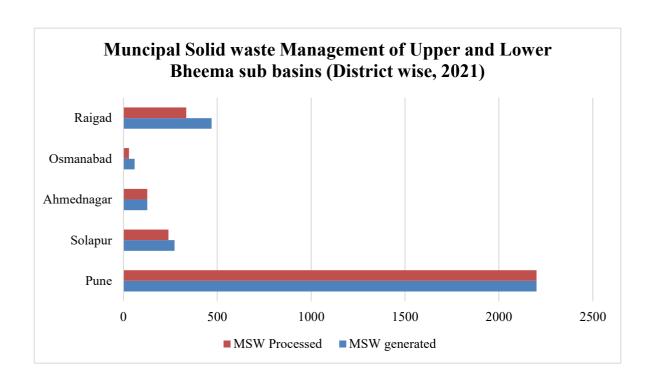


Figure 11: Municipal solid waste generated in the districts of Telangana.

#### ✓ Current Status of Solid waste Management in Andhra Pradesh:

Andhra Pradesh State comprises 123 Urban Local Bodies (ULBs), including 17 Municipal Corporations and 106 Grade-I, II, and III municipalities. These ULBs collectively generate 6,890 tonnes per day (TPD) of Municipal Solid Waste (MSW) from commercial areas, institutions, and residential areas. Most Municipal Corporations and major municipalities have implemented 100% door-to-door waste collection, achieving an impressive 98.17% segregation at the source. For waste transportation, the state utilizes a robust fleet comprising 480 refuse compactors, 225 skid steer loaders, 330 mini compactors, 10,649 waste collection trolleys, and 1,566 road and mini collection trucks. Two waste-to-energy plants, developed under the Public-Private Partnership (PPP) model by M/s. Jindal Urban Waste Management Ltd., are operational. One plant in Greater Visakhapatnam Municipal Corporation processes 900 TPD of waste, while the other in Guntur Municipal Corporation processes an equivalent amount.

The state has established 28 waste-to-compost plants catering to 34 ULBs and four biomethanation plants serving eight ULBs. Additionally, windrow composting units have been set up in 81 ULBs as interim solutions until the Integrated Solid Waste Management (ISWM) projects and compost plants are fully operational. Compost produced is sold to farmers and utilized in parks, central medians, and avenue plantations.

Individual vermi-compost plants are also being proposed in residential areas and at bulk waste generator sites to enhance green belt development within municipal limits. Andhra Pradesh has identified 1,922 bulk waste generators, of which 760 have established wet waste processing facilities, collectively processing 64.10 TPD of waste. Compressed Natural Gas (CNG) produced through this process is sold to commercial establishments such as hotels and restaurants.

Sanitary landfill facilities have been developed by the Greater Visakhapatnam Municipal Corporation, Tirupati Municipal Corporation, Ongole Municipal Corporation, and Chirala Municipality. The remaining ULBs are in the process of developing landfill facilities and compost plants. Furthermore, bio-mining processes for the bio-remediation of existing municipal dump yards are being implemented across the state, aiming for environmentally sustainable waste management solutions.

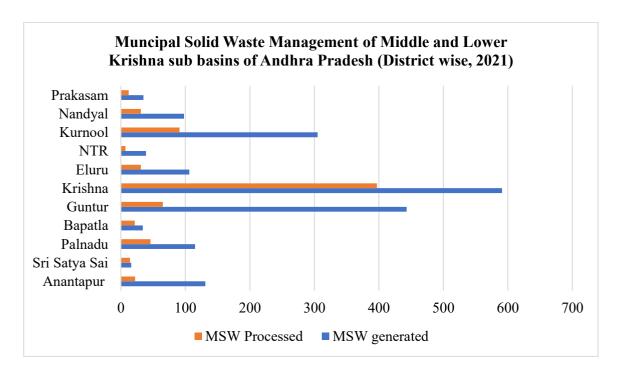


Figure 12: Municipal solid waste generated in the districts of Andhrapradesh.

The table below provides information on Municipal Solid Waste Management of Krishna river basin sub-basins wise, presented district-wise as of 2021.

**Table 9:** Municipal solid waste generated in the districts of Krishna River basin.

Sl No.	Sub basin	District	Waste generated	Waste processed
		Bellary	(MT/D) 449.54	(MT/D) 76.86
		Chikamagluru	103.63	75.77
		Chitradurga	124.28	52.62
		Davangere	210.46	69.61
	Upper	Dharwad	397.84	171.26
1	Tungabhadra	Raichur	203.06	73.71
		Shivamogga	262.17	212.47
		Tumkur	228.84	179.29
		Uttar	137.89	156.03
		kannada		

		Bagalkot	209.55	162.09
	Lower	Hassan	135.64	40.54
2	Tungabhadra	Koppal	117.02	72.29
		Richur	203.06	73.71
		Pune	2200	2200
	Upper and	Solapur	272	240
3	Lower	Ahmednagar	127	127
	Bheema	Osmanabad	60	30
		Raigad	470	335
		Nagarkurnool	13	-
	Middle	Wanaparthy	32	-
4	Krishna	Mahbubnagar	106	-
		Jogulamba	18	-
		Gadwal		
		Hyderabad	6000	-
		Khammam	190	-
		Vikarabad	30	-
		Jangaon	14	-
		Yadadri Bhuvanagiri	33	-
	Lower	Sangareddy	49	-
_	Krishna	Suryapet	65	-
5		Nalgonda	64	-
		Medchal	22	-
		Malkajgiri		
		Guntur	443	65
		Krishna	591	397
		NTR	39	7

#### Hazardous waste:

#### **✓** Current Status of Hazardous waste Management in Karnataka:

As per the data available from CPCB, it's visible that in Krishna Basin. In the state of Karnataka, there are 3972 hazardous waste generating units, of which only 2999 units (i.e. 75%) have submitted annual returns for the year 2022-23.

There are 148 recyclers, 47 utilizers (as per CPCB SOPs) and 2 captive utilizers in the state for management of hazardous waste and about 1,84,287 MT, 46,056 MT & 1,36,714 MT HW recycled and utilized respectively during 2022-23. There are 09 cement plants in Karnataka and about 3,70,502 MT of HW co-processed during 2022-23. The state has total 10 common TSDFs; 01 with integrated SLF & incinerator, 02 with SLF only and 07 standalone incinerators. During 2022-23, about 82,804 MT HW disposed in SLF & 12,444 MT disposed through incineration. Apart from this, Karnataka has 01 SLF & 02 incinerator as captive facilities.

**Table 10:** Hazardous waste generated in the districts of Karnataka (Upper and Lower Tungabhadra Sub basins)

SI	Sub basin	District		Waste genera	ted (MT/D)			Waste proces	sed (MT/D)	
no			landfillable	incinerable	recylable	utilizable	landfillable	incinerable	recylable	utilizable
		Bellary	1224.975	106.086	3909.2977	130580.41	1224.975	106.086	3892.2884	130579.65
		Chikamagluru	3	7.63	5.35	0	0	7.63	5.35	0
		Chitradurga	0	9.016	63.998	0	0	8.569	65.068	0
	UPPER	Davangere	49.1	218.5	142.9	172.2	49	218.5	142.7	172.2
1	THUNGABADRA	Dharwad	60.925	737.5836	307.6151	0	52.28	712.5936	304.8601	0
		Raichur	1850.329	119.892	1035.7905	0	1850.329	119.892	1146.6955	0
		Shivamogga	13055.75	12	228.37	0	13055.75	10	228.37	0
		Tumkur	495.13	2010.14	2782.96	0	487	1996.94	2163.83	0
		Uttar kannada	588.62	60.93	691.62	0	558.04	60.62	491.237	0
		Bagalkot	0	8.06	89.2	2181.3	0	8.06	89.2	826.503
		Hassan	6482.85	89.49	1931.828	0	5807.572	66.7715	66.7714	0
	LOWER	Koppal	0	2	178.5	0	0	2	178.5	0
2	THUNGABADRA	Ananthpur	184.97	21.7	634.62	524.6	185.96	23.4	177.36	524.6
		Kurnool	2460.4	93.55	37.7	8496.74	2460.4	63.15	37.7	8496.74
		Mahbubanagar	1919.62	817.98	64.57	171.86	1919.623	217.15	_	_

#### ✓ Current Status of Hazardous waste Management in Maharashtra:

As per the data available from CPCB, it's visible that in Krishna Basin. In the state of Maharashtra, there are there are 7502 HW generating units, out of which only 7042 units (i.e. 94%) have submitted annual returns for the year 2022-23. The number of units exempted from authorization is not provided by MPCB. For management of hazardous waste, there are 463 recyclers, 321 utilizers (as per CPCB SOPs) & 13 captive utilizers and about 95,610 MT and 92,247 MT quantity of HW recycled and utilized by respective facilities during 2022-23. The state has 04 common TSDFs (03 integrated facilities and 01 SLF only). During 2022-23, about 3,34,541 MT HW disposed in SLF & 69,670 MT disposed through incineration. Apart from this, only 01 captive incinerator in the State and during 2022-23 about 553 MT of HW has been disposed.

**Table 11:** Hazardous waste generated in the districts of Maharashtra and Karnataka (Upper Krishna Sub basin)

Sl no	Sub basin	District		Waste generat	ed (MT/D)			Waste process	ed (MT/D)	
			landfillable	incinerable	recylable	utilizable	landfillable	incinerable	recylable	utilizable
		Satara	7,123	61,394	12,411	4,021	_	_	_	_
		Sangli	30	16,158	205	47	_	_	_	_
	-	Kolhapur	16,250	29,179	105	1,360	_	_	_	_
	-	Bijapur								
	UPPER KRISHNA	Yadgir	0	709.78	8.05	0.405	0	709.78	6.74	0
1		Gadag	0	0	0	0	0	0	0	0
		Sindhudurg	0	9	51	0	_	_	_	_
		Belagavi	63.792	682.47	2862.96	30.96	6.83	4485.48	2375.78	0

#### ✓ Current Status of Hazardous waste Management in Andhra Pradesh:

In the state of Andhra Pradesh, there are 2,854 hazardous waste generating units and all units have submitted annual returns for the year 2022-23. For the management of hazardous waste in the state of Andhra Pradesh there are 65 recyclers, 105 utilizers (as per CP SOPs), 106 major captive utilizers (having capacity more than 50 MTA) and 17 co-processor operating and about 1,52,817 MT, 8,54,908 MT & 9,67,406 MT of HW recycled, utilized and co-processed by respective facilities during 2022- 23. Apart from that, there are 713 captive utilizers, out of which, 607 units reported as captive utilizers of used/ waste oil/in house lubrication having capacity less than 50 MTA and utilized about 231 MT of used/ waste oil. In interstate movement, Andhra Pradesh has received 44,694 MT, 35,358 MT and 312 MT of HW for recycling, co-processing and utilization and sent 3,884 MT, 23,629 MT and 38,037 MT for recycling, co-processing and utilization respectively, during 2022-23. The State has 02 common TSDFs of which 01 is integrated facility (both SLF & incinerator) and 01 with SLF only. About 1,91,175 MT of HW disposed in SLF & 638 MT disposed through incineration during 2022-23. Apart from this, Andhra Pradesh has 08 captive facilities [i.e. 02 SLFs & 06 incinerators] wherein 2,419 MT of HW disposed in SLF and 1,348 MT in incinerator during 2022-23.

#### ✓ Current Status of Hazardous waste Management in Telangana:

In the state of Telangana, there are 2923 hazardous waste generating units, of which only 1821 units (i.e. 66%) have submitted annual returns for the year 2022-23. There are 75 recyclers, 30 utilizers (as per CPCB SOPs) and 10 co-processors operating in the state and about 84,375 MT HW recycled, 50,524 MT utilized and 1,73,198 MT co processed during 2022-23. The state has 01 common TSDF

having integrated SLF & incinerator, however, quantity of HW disposed during 2022-23 has not been by the operator. No captive facility for disposal of HW is available in the state of Telangana.

Table 12: District wise Hazardous Waste generation in various sub-basins of Krishna River.

		l	HW generation	Annual (MT)			HW management (MT)			
	District	Landfillable	Incinerable	Recyclable	Utilizable	Total	Recycled	Utilized	Disposed in Secured Landfill	Disposed through Incinerator
	Pune	6422	3141	32407	206183	248453	33959.97	1547		
Upper and	Solapur	5034	2177	11112	1431	19754	0	2812.2		
Lower Bheema	Ahmednagar	11920	1931	18043	8784	40679	0	0		
Directina	Osmanabad	106	162	2116	106	2489	0	0		
	Raigad	95338	97199	61556	57738	311831	1823.32	21784.19		
	Nagarkurnool	0	0	25	0	25	25	0	0	0
Middle	Wanaparthy	10.22	0	51	0	61	50.55	0	10.2	0
Krishna	Mahbubnagar	1415.45	282.43	62	137	1897	62	137	1415.5	282.43
	Jogulamba Gadwal	0	7.2	25	0	32	25	0	0	7.2
	Hyderabad	1852.43	130.63	135	0	2118	135	0	1847	130
	Khammam	0	0.33	50	8	58	50	8	0	0.33
	Vikarabad	5.72	0	0	4980	4986	0	4980	0	0
	Jangaon	0	0	1	0	1	0.78	0	0	0
	Yadadri Bhuvanagiri	14254.81	34.77	21447	4059	39796	21447	4059	15678.7	41.17
	Sangareddy	46483.86	1020.95	12492	84024	144021	12491.75	84024	46517.6	984.95
Lower Krishna	Suryapet	1371.22	0	22	1833	3226	21.82	1833	1459.8	34.02
Krisiiia	Nalgonda	3350.6	5.2	0	4892	8248	0.15	4892	3486.52	122.96
	Ranga Reddy	4307.16	193.76	4276	32	8808	4276	32	2709.94	315.4
	Medchal– Malkajgiri	34998	556	39134	18219	92907	39134	18219	34001.8	574.6
	Guntur	2823.39	0	4.56	1710.64	4538.59	4.56	0	2888.22	0
	Krishna	5.3	0	11.44	147.67	164.41	6.54	0	0	0
	NTR	1688.97	456.3	124.7	22034.7	24304.67	117.3	13942.29	1461.69	73.9

## **✓** Current Status of Hazardous waste Management in Andhra Pradesh:

In the state of Andhra Pradesh, there are 2,854 hazardous waste generating units and all units have submitted annual returns for the year 2022-23. For the management of hazardous waste in the state of Andhra Pradesh there are 65 recyclers, 105 utilizers (as per CP SOPs), 106 major captive utilizers (having capacity more than 50 MTA) and 17 co-processor operating and about 1,52,817 MT, 8,54,908 MT & 9,67,406 MT of HW recycled, utilized and co-processed by respective facilities during 2022- 23. Apart from that, there are 713 captive utilizers, out of which, 607 units reported as captive utilizers of used/ waste oil/in house lubrication having capacity less than 50 MTA and utilized about 231 MT of used/ waste oil. In interstate movement, Andhra Pradesh has received 44,694 MT, 35,358 MT and

312 MT of HW for recycling, co-processing and utilization and sent 3,884 MT, 23,629 MT and 38,037 MT for recycling, co-processing and utilization respectively, during 2022-23. The State has 02 common TSDFs of which 01 is integrated facility (both SLF & incinerator) and 01 with SLF only. About 1,91,175 MT of HW disposed in SLF & 638 MT disposed through incineration during 2022-23. Apart from this, Andhra Pradesh has 08 captive facilities [i.e. 02 SLFs & 06 incinerators] wherein 2,419 MT of HW disposed in SLF and 1,348 MT in incinerator during 2022-23.

#### ✓ Current Status of Hazardous waste Management in Telangana:

In the state of Telangana, there are 2923 hazardous waste generating units, of which only 1821 units (i.e. 66%) have submitted annual returns for the year 2022-23. There are 75 recyclers, 30 utilizers (as per CPCB SOPs) and 10 co-processors operating in the state and about 84,375 MT HW recycled, 50,524 MT utilized and 1,73,198 MT co processed during 2022-23. The state has 01 common TSDF having integrated SLF & incinerator, however, quantity of HW disposed during 2022-23 has not been by the operator. No captive facility for disposal of HW is available in the state of Telangana.

## • Biomedical waste (BMW):

Based on the data from the Annual Report on Biomedical Waste Management for the year 2023, the information on biomedical waste for Karnataka, Maharashtra, Telangana, and Andhra Pradesh is presented below.

✓ **Karnataka:** Biomedical waste management status of Karnataka state are as follows.

**Table 13**: Biomedical waste generation of Karnataka state.

No. of HCFs	54,594
No. of bedded HCFs	10,183
No. of non-bedded HCFs	44,411
No. of beds	2,43,071
No. of CBWTFs	26
No. of HCFs granted authorization	5,313
No. of HCFs utilizing CBWTFs	29,013
No. of HCFs having Captive Treatment Facilities	1,581
No. of Captive Incinerators Operated by HCFs	1
Quantity of BMW generated in kg/day	74,013.82
Quantity of BMW treated in kg/day	45,738
No. of HCFs/CBWTFs violated BMW Rules	1,808
No. of Show-Cause notices/Directions issued to defaulter HCFs/CBWTFs	415

✓ **Maharashtra:**Biomedical waste management status of Maharashtra state are as follows.

 Table 14: Biomedical waste generation of Maharashtra state.

No. of HCFs	76,413
No. of bedded HCFs	22,783
No. of non-bedded HCFs	53,630
No. of beds	3,58,789
No. of CBWTFs	30
No. of HCFs granted authorization	2,186
No. of HCFs utilizing CBWTFs	58,515
No. of HCFs having Captive Treatment Facilities	255
No. of Captive Incinerators Operated by HCFs	0
Quantity of BMW generated in kg/day	77,862
Quantity of BMW treated in kg/day	77,861
No. of HCFs/CBWTFs violated BMW Rules	483
No. of Show-Cause notices/Directions issued to defaulter	199
HCFs/CBWTFs	

# ✓ **Andhra Pradesh:** Biomedical waste management status of Andhra Pradesh state are as follows

 Table 15: Biomedical waste generation of Andhra Pradesh state.

No. of HCFs	14,314
No. of bedded HCFs	7,687
No. of non-bedded HCFs	6,631
No. of beds	1,68,043
No. of CBWTFs	12
No. of HCFs granted authorization	3,218
No. of HCFs utilizing CBWTFs	13,804
No. of HCFs having Captive Treatment Facilities	NIL
No. of Captive Incinerators Operated by HCFs	NIL
Quantity of BMW generated in kg/day	17,784.118
Quantity of BMW treated in kg/day	17,784.118

No. of HCFs/CBWTFs violated BMW Rules	1194
No. of Show-Cause notices/Directions issued to defaulter	1194
HCFs/CBWTFs	

✓ **Telangana:** Biomedical waste management status of Telangana state are as follows.

**Table 16**: Biomedical waste generation of Telangana state.

No. of HCFs	
	10,292
No. of bedded HCFs	5,386
No. of non-bedded HCFs	4,906
No. of beds	1,43,313
No. of CBWTFs	11
No. of HCFs granted authorization	5,553
No. of HCFs utilizing CBWTFs	10,292
No. of HCFs having Captive Treatment Facilities	0
No. of Captive Incinerators Operated by HCFs	0
Quantity of BMW generated in kg/day	26,316
Quantity of BMW treated in kg/day	26,316
No. of HCFs/CBWTFs violated BMW Rules	232
No. of Show-Cause notices/Directions issued	232
to defaulter HCFs/CBWTFs	

#### • Plastic Waste

Plastic waste is one of the most critical environmental challenges, as it significantly impacts land, water, and air. It consists of discarded plastic materials, including single-use plastics like bags, bottles, and straws, as well as packaging waste and industrial plastic leftovers. These materials take hundreds of years to decompose, leading to severe pollution problems worldwide.

According to the CPCB Annual Report 2021 on the implementation of the Plastic Waste Management Rules, 2016, the plastic waste management details for Karnataka, Maharashtra, Andhra Pradesh, and Telangana, which fall within the Krishna River Basin, are outlined below on a state-wise basis.

#### ✓ Karnataka:

a. The estimated plastic waste generation in state is approximately 368080 TPA during 2020-21.

- b. Government of Karnataka has imposed complete ban on manufacturer, use and sale of carry bags.
- c. There are 239 plastic manufacturing / recycling units & 128 unregistered plastic manufacturing/recycling units in the State.
- d. 141 Decentralized dry waste Collection Centre (DWCC) is established at ward level to collect, segregate and recycled the dry waste from households and commercial establishment.
- e. Informal waste pickers are involved in dry waste collection system.
- f. Bruhat Bengaluru MahanagaraPalike (BBMP) has collected plastic waste approx. 1,44,000tonnes during year 2020-21.
- g. BBMP has established 2 facilities for processing and disposal of plastic waste of capacity 10 TPD each. In addition there are 66 registered plastic recycling units in Bengaluru.
- h. Around 36000 TPA of low value plastic is supplied cement plants., approximately 1,08,000 TPA is channelized for recycling.
- i. Approx. 49056 TPA of low value plastic is supplied to cement plants.
- j. Status of marking and labeling is observed as per Rules.
- k. Violation of Rules have been observed, Director of Municipal Administration has conducted 2537 raids and Rs. 19.60 Lakhs fine was collected and about 2563 Tons of banned plastics seized during raids.
- 1. 283 local bodies, other than Bengaluru BMP, have submitted the Annual Report to KPCB.

#### ✓ Maharashtra:

- a. The estimated plastic waste generation in state is approximately 3,11,254 TPA during 2020-21.
- b. Complete ban has been imposed on certain plastic products like
  - i. Plastic bags with or without handle irrespective of size and thickness
  - ii. Single Use disposable items like cups, plates, straws, spoonsetc.
  - iii. Non-woven Polypropylene bags vide Maharashtra Plastic and Thermocol Products Notification, 2018 dated: 23.03.2018 and amendment dated 11.04.2018, 30.06.2018 & 14.06.2019.
- c. The efficiency of plastic waste collection and segregation is 81% and disposal is 64%.d. Collected plastic waste is utilized as:

☐ Quantity recycled (Tons)- Plastic Granules: 29,485
☐ Quantity recycled (Tons)- Pyrolysis: 4,918
☐ Quantity recycled (Tons)- Road Construction: 13,513
☐ Quantity recycled (Tons)- RDF (Refuse Derived Fuel): 124,725

- □ Quantity of Plastic Waste sent to Landfilling facility (Tons): 23,237
  e. There are 6 plastic manufacturing unit out of 6 plastic producing units, 3 manufacture plastic packaging including multi-layer plastic. Further 7 registered compostable plastic manufacturing units and 111 recycling units are present in the state.
  f. Violations observed and the following actions have been taken as per Rules:
  □ Issued closure directions to 405 plastic and thermocol manufacturing industries
  □ Collected fine of Rs. 3.91 Cr from shops/ establishments through joint survey with local bodies as well as independently in FY 2020-21, for non-compliance with the Maharashtra Plastic Notification
  □ Around 1425 tonnes of banned plastic items have been seized in FY 2020-21 for non-compliance with the Maharashtra Plastic Notification
- g. 394 out of 403 ULBs have submitted the Annual Report to Maharashtra SPCB.

#### ✓ Andhra Pradesh:

- a. The estimated plastic waste generation in the State is 39626.45 TPA (ULBs 37,446.45 & Census Towns 2,180) during the year 2020-21.
- b. Rule 4(c & d) for thickness criteria has been implemented in the state.
- c. There are 135 plastic manufacturing units (Producers 117& Recyclers- 18), 1 compostable plastic unit and no unregistered unit in the State.
- d. Certain Urban Local bodies like Tadipatri, Vijayawada, Tirupati & Bobili have put ban on plastic carry bags irrespective of their thickness. All local bodies have taken stand on ban on their own.
- e. Plastic waste is being collected and segregated by ULBs and sent to recyclers. Most of the Plastic waste is channelized through Kabadiwalas to recyclers. The non-recyclable plastic waste generated from the municipalities and from bio mining operating is being sent to Cement plants and partly for road formations.
- f. Violation of PWM Rules has been observed. Further State Urban Development Dept., constituted 721 Task force teams 240 tons of plastic carry bags was seized and Rs. 169 lakhs of fines were collected from defaulters.

#### ✓ Telangana:

- a. The estimated plastic waste generation in the state is approximately 472675TPA during 2020-21.
- b. Complete ban on <50-micron thickness plastic carry bags is under implementation.
- c. Door to door waste collection done by staff of ULBs and segregated plastic waste utilized for recycling 8912 MT.
- d. There are 316 plastic manufacturing/recycling units, 2 MLP manufacturing units and 5 compostable unit& no unregistered plastic manufacturing / recycling units in the State.
- e. Marking is being carried out on the carry bags.

f. Violation has been observed in the state and Closure Direction and disconnection of power supply were issued to 6 plastic recycling units who were in operation without obtaining consent from the Board and Registration as per PWM Rules, 2016

#### • Challenges Identified:

- a. **Infrastructure Deficits:** Many rural and semi-urban areas within the Krishna Basin, such as Raichur, Bagalkot, Nanded, Suryapet, and Kurnool, lack adequate infrastructure for effective waste segregation. The Urban Local Bodies (ULBs) in these regions often struggle with limited waste collection and processing systems, resulting in lower segregation rates and inefficient waste management.
- b. **Public Awareness and Engagement:** Districts with low waste segregation rates frequently correlate with areas where public awareness regarding the benefits of waste segregation is minimal. Limited community participation and lack of behavioral change campaigns hinder consistent waste management efforts.
- c. **Policy Enforcement:** The inconsistent segregation percentages across different districts of the Krishna Basin suggest varying levels of policy enforcement. Some regions benefit from active local governance and strict waste management regulations, while others lack monitoring and accountability in implementing waste segregation policies.
- d. **Resource Allocation:** Urban centers like Hyderabad, Pune, Vijayawada, and Belagavi generally report higher segregation rates compared to rural areas. This disparity is attributed to better funding, infrastructure, and human resources allocated to waste management in urban regions, whereas rural and semi-urban areas face financial and logistical constraints.

#### • Public and Community Toilets

Public and community toilets play a crucial role in improving sanitation and hygiene in both urban and rural areas of the Krishna River Basin. These facilities are essential for reducing open defecation, ensuring clean public spaces, and promoting public health. Several government and non-government initiatives have contributed to the development of such sanitation infrastructure in Karnataka, Maharashtra, Andhra Pradesh, and Telangana.

Based on the available data from Swachh Bharat Urban 2.0, the details regarding public and community toilets in the states of Karnataka, Andhra Pradesh, Maharashtra, and Telangana are as follows.

#### a. Karnataka:

In the state of Karnataka, as per the data from Swachh Bharat Urban 2.0, a total of **302 cities** have been covered under the sanitation initiative. The state has **1,781 community toilets**, providing shared sanitation facilities primarily for slum dwellers and underserved areas. Additionally, there are **2,926 public toilets**, catering to the general public in markets, transport hubs, and other high-traffic areas. To further enhance sanitation infrastructure, **172 urinals** have also been installed across various locations.

 Table 17: Public and Community toilets in Karnataka state.

Slno	Urban Local body	<b>Community Toilets</b>	<b>Public Toilets</b>	Urinals
1	AFZALPUR (TP)	8	2	-
2	AINAPUR	11	1	-
3	ALAMELA (TP)	1	_	-
4	ALAND	13	-	-
5	ALNAVAR (TP)	1	12	-
6	ALUR (TP)	-	2	-
7	AMEENAGADA (TP)	10	-	-
8	ANAVATTHI	2	-	-
9	ANEKAL (TMC)	-	3	-
10	ANKALAGI- AKKATANGERAHAALA	1	-	-
11	ANKOLA (TP)	2	5	-
12	ANNIGERI (TMC)	15	1	-
13	ARABHAVI (TP)	5	2	-
14	ARKALGUD (TP)	-	3	-
15	ARSIKERE (TMC + OG)	2	10	-
16	ATHNI (TMC + OG)	13	8	7
17	ATTIBELE(TMC)	-	5	-
18	AURAD (TP)	-	2	-
19	BABALESHWAR	1	-	-
20	BADAMI (TMC)	18	3	-
21	BAGALKOT (CMC)	24	40	-
22	BAGEPALLI (TMC)	1	5	-
23	BAIL HONGAL (TMC)	10	2	6
24	BAINDURU	2	2	-
25	BAJAPE	1	3	-
26	BALAGANUR (TP)	3	-	-
27	BANGARAPET (TMC)	1	2	1
28	BANNUR (TMC)	-	6	-
29	BANTVAL (TMC)	-	8	-
30	BASAVAKALYAN (CMC)	7	11	-
31	BASAVANA BAGEVADI	16	6	2
32	BASHETTIHALLI	-	2	-
33	BELAGALI (TP)	-	8	-
34	BELGAUM (M CORP. + OG)	26	47	-
35	BELLARY	36	89	-
36	BELLURU	-	3	-
37	BELTANGADI (TP)	-	2	-
38	BELUR (TMC)	-	4	-
39	BHADRAVATI	42	9	-
40	BHAGYANAGAR (TP) BHALKI (TMC)	6	<u>-</u> 1	-
41	BHATKAL (TMC)	5	1	
	BIDADI (TMC)	3	8	-
43	BIDADI (TMC) BIDAR (CMC + OG)	20	25	-
45	BIJAPUR	21	62	12

46	BILGI (TP)	8	2	-
47	BIRUR (TMC)	1	6	_
48	BOGADI	-	4	_
49	BOMMASANDRA (TMC)		3	
49	BOWINASANDRA (TWC)	-	3	-
50	BORAGAON (TP)	8	3	1
51	BRUHAT BENGALURU	5	378	1
	MAHANAGARA PALIKE	J	370	
52	BYADGI (TMC)	-	1	_
53	CHADACHANA (TP)	3	3	1
	` ′			1
54	CHALLAKERE (TMC)	2	3	-
55	CHAMARAJANAGAR (CMC)	6	26	-
56	CHANDAPURA (TMC)	-	2	-
57	CHANNAGIRI (TP)	2	4	2
58	CHANNAPATNA (CMC)	1	13	_
		•	13	
59	CHANNARAYAPATNA (TMC + OG)	-	5	-
60	CHIKKABALLAPURA (CMC)	3	19	-
61	CHIKKABANAVARA	-	1	-
62	CHIKMAGALUR	-	27	-
63	CHIKNAYAKANHALLI (TMC)	-	6	-
64	CHIKODI	25	3	-
65	CHINCHALI (TP)	1	4	_
66	CHINCHOLI (TP)	23	4	_
67	CHINTAMANI (CMC)		20	_
0,	Cim (in min (cinc)		20	
68	CHITAPUR (TMC)	17	8	4
69	CHITGOPPA (TMC)	2	10	-
70	CHITRADURGA (CMC + OG)	1	28	-
71	DANDELI (CMC)	4	16	-
72	DAVANAGERE	2	28	-
73	DEVADURGA (TMC)	5	1	-
74	DEVANAHALLI (TMC)	2	5	-
75	DEVARAHIPPARAGI (TP)	1	1	-
76	DOD BALLAPUR (CMC + OG)	2	7	-
77	EXAMBA (TP)	9	1	2
78	GADAG-BETIGERI	45	27	-
79	GAJENDRAGARH (TMC)	12	1	-
80	GANGAWATI	27	8	-
81	GAURIBIDANUR (TMC)	3	10	-
82	GOKAK	29	18	5
83	GUBBI (TP)	-	6	-
84	1 1	4	2	
04	GUDIBANDA (TP)	4		-

85	GULBARGA (M CORP. + OG)	11	74	1
86	GULEDGUDDA (TMC)	12	3	5
00	GOLEDGODDA (TMC)	12	3	3
87	GUNDLUPET (TMC)	3	19	-
88	GURMATKAL (TP)	9	3	-
89	HAGARIBOMMANAHALLI	14	4	-
	(TMC)			
90	HALIYAL (TP)	-	7	-
91	HALLI KHEDA (TMC)	17	1	-
92	HANGAL (TMC)	3	3	1
93	HANUR (TP)	-	2	-
94	HARAPANAHALLI (TMC)	9	5	-
95	HARIHAR (CMC)	9	18	-
96	HAROGERI(TMC)	12	1	-
97	HAROHALLI	-	1	-
98	HASSAN	-	36	-
99	HATTI	1	1	1
100	HAVERI (CMC)	3	18	-
101	HEBBAGODI(CMC)	-	4	-
102	HEGGADADEVANKOTE (TP)	1	6	-
103	HIREKERUR (TP)	2	4	1
104	HIRIYUR (TMC)	-	12	-
105	HOLALKERE (TP)	5	8	2
106	HOLE NARSIPUR (TMC)	-	7	-
107	HOLLEHUNURU	-	1	-
108	HOMNABAD (TMC)	3	6	1
109	HONAVAR (TP)	31	4	7
110	HONNALI (TP)	-	4	-
111	HOOTAGALLI	-	8	-
112	HOOVINA HADAGALLI (TMC)	9	1	-
113	HOSAKOTE (CMC)	-	14	-
114	HOSANAGARA (TP)	-	3	-
115	HOSDURGA (TMC)	4	15	1
116	HOSPET (CMC)	44	22	1
117	HUBLI-DHARWAD	2	74	30
118	HUKERI (TP)	11	1	-
119	HUNASAGI	1	-	-
120	HUNASAMARANAHALLI	-	2	-
121	HUNGUND (TP)	-	1	-
122	HUNSUR (TMC)	-	14	-
123	ILKAL (CMC)	9	12	1
124	INDI (TMC)	8	5	2
125	JAALI (TP)	1	4	-
126	JAGALUR (TP)	- 14	11	-
127	JAMKHANDI JEWAR GL (TR)	14	11	-
128 129	JEVARGI (TP)  JIGANI(TMC)	3	3	-
130	JOG KARGAL (TP)	1	8	-
131	KAARATAGI (TMC)	4	3	-
132	KABBURA (TP)		3	
132	KADDUKA (II)	-	) 3	-

133	KADABA	1	1	-
134	KADUR (TMC)	-	5	-
135	KAGAWADA	1	1	-
136	KAKKERA (TMC)	4	17	-
137	KALAGI	2	1	-
138	KALGHATGI (TP)	4	2	-
139	KALLOLI (TP)	4	1	-
140	KAMALAPURA	1	1	-
141	KAMALAPURAM (TP)	33	3	-
142	KAMATAGI (TP)	-	1	-
143	KAMPLI (TMC)	26	4	-
144	KANAKAGIRI (TP)	14	11	-
145	KANAKAPURA	-	16	-
146	KANKANAVADI(TMC)	3	6	-
147	KARKAL	-	4	-
148	KARWAR (CMC + OG)	34	12	-
149	KAUP (TP)	2	3	_
150	KEMBAV (TMC)	-	1	_
151	KERUR (TP)	1	1	-
152	KHANAPUR (TP)	3	3	-
153	KINNIGOLI	-	4	-
154	KOLAHARA (TP)	-	2	-
155	KOLAR (CMC)	7	14	-
156	KOLLEGAL (CMC)	13	8	-
157	KONNUR (TP)	12	2	2
158	KOPPA	-	4	1
159	KOPPAL (CMC)	7	8	1
160	KORATAGERE (TP)	4	5	-
161	KOTEKAAR (TP)	-	2	-
162	KOTTURU (TP)	1	2	-
163	KOWTAL	5	-	-
164	KRISHNARAJANAGARA (TMC)	1	3	-
165	KRISHNARAJPET (TMC)	1	11	-
166	1 1	14		
167	KUDATINI (TP)  KUDCHI (TP)	14	16	<u>-</u> 1
168	KUDLIGI (TP)	8	8	-
169	KUKANOORU (TP)	5	-	-
170	KUMTA (TMC + OG)	16	12	1
1,0	TOMIT (THE 'OS)		12	•
171	KUNDAPURA (TMC)	7	17	-
172	KUNDGOL (TP)	2	19	1
173	KUNIGAL (TMC)	-	11	-
174	KUREKUPPA (TMC)	1	10	-
175	KIIDI IDI ICODI (TMC)	13	1	
1/5	KURUDUGODU (TMC)	13	1	-
176	KUSHALNAGAR (TP)	-	4	_
	()			
177	KUSHTAGI (TMC)	-	14	
178	LAKSHMESHWAR (TMC)	14	4	5
179	LINGSUGUR (TMC)	1	2	-
180	LOKAPURA	7	1	-

181	MACCHE	-	1	_
182	MADANAYAKANAHALLI	_	1	_
102			1	
183	MADDUR (TMC)	-	7	-
184	MADHUGIRI (TMC)	-	11	-
185	MADIKERI (CMC)	-	9	-
186	MAGADI (TMC)	1	8	-
187	MAHALINGPUR (TMC)	9	3	-
188	MALAVALLI (TMC)	6	2	-
189	MALEBENNURU (TMC)	-	6	-
100	MALLADUDA (TD)		2	
190 191	MALLAPURA (TP)  MALUR (TMC)	2	2	-
191	MANAGULI (NP)	8	1	-
192	MANDYA (CMC)	6	30	-
194	MANGALORE	1	88	_
195	MANKI	-	1	-
196	MANUVALLI(TMC)	17	5	_
		-,		
197	MANVI (TMC)	27	3	-
198	MARIAMMANAHALLI (TP)	7	1	-
199	MASKI (TMC)	5	2	1
200	M.K HUBBALLI (TP)	3	2	-
201	MOLAKALMURU (TP)	6	2	-
202	MID ALCU(TMG)	10	1	7
202	MUDALGI (TMC)	12	1	7
203	MUDBIDRI (TMC)  MUDDEBIHAL (TMC)	5	19	-
204	WIODDEBITIAL (TWIC)	3	2	-
205	MUDGAL (TP)	-	5	_
206	MUDHOL (TMC)	17	26	7
207	MUDIGERE (TP)	-	3	-
208	MUGALAKODA (TMC)	2	-	-
209	MULBAGAL (TMC)	1	7	-
210	MULGUND (TP)	25	3	3
211	MULKI (TP)	2	1	1
212	MUNDARGI (TMC)	9	5	5
213	MUNDGOD (TP)	2	4	-
214 215	MYSORE NAAGANURA (TP)	3	142	-
216	NAGAMANGALA (TP)	-	5	-
210	1710/11/10/LA (11)			_
217	NALATAVADA (TP)	5	6	-
218	NANJANGUD (TMC)	4	19	2
219	NARASIMHARAJAPURA (TP)	-	4	-
220	NAREGAL (TP)	6	1	1
221	NARGUND (TMC)	31	4	-

222	NAVALGUND (TMC)	13	1	-
223	NAYAKANAHATTI (TP)	2	3	-
224	NELAMANGALA (TMC)	-	5	-
	AND CANADA ED			
225	NIDAGUNDI TP	5	1	-
226	NIPANI (CMC)	30	5	-
227	NYAMATHI	-	1	-
228	PANDAVAPURA (TP)	1	11	-
229	PAVAGADA (TMC)	1	6	-
230	PEERANAVAADI	-	1	-
231	PIRIYAPATNA (TP)	-	5	-
232	PUTTUR (TMC)	2	26	-
233	RABKAVI BANHATTI (CMC)	4	39	-
234	RAICHUR (CMC)	45	62	2
235	RAMANAGARA (CMC)	-	8	-
236	RAMDURG (TMC)	9	2	-
237	RAMMANAHALLI	1	2	-
238	RANIBENNUR (CMC)	41	21	4
239	RATTIHALLI	-	2	-
240	RAYBAG (TP)	-	16	2
241	ROBERTSON PET (CMC + OG)	30	19	4
242	RON (TMC)	9	2	-
243	SADALGI	-	1	-
244	SAGAR (CMC)	-	6	-
245	SAKLESHPUR (TMC)	-	1	-
246	SALIGRAM	1	1	-
247	SANDUR (TMC)	17	3	-
248	SANKESHWAR (TMC)	17	4	-
249	CADACUD (TD)		1	
250	SARAGUR (TP) SAUNDATTI-YELLAMMA	3	8	7
250	(TMC)	3	8	/
251	SAVANUR (TMC)	1	6	-
252	SEDAM (TMC)	13	4	4
253	SHAHABAD (CMC)	8	2	-
254	SHAHPUR (TMC)	7	8	-
255	SHEDBAALA (TP)	5	1	-
256	SHIGGAON (TMC)	1	-	-
257	SHIKARPUR	-	15	-
258	SHIMOGA (CMC)	13	49	3
259	SHIRHATTI (TP)	29	2	1
260	SHIRURU	6	1	1
261	SHORAPUR (TMC)	8	4	-
262	SHRIRANGAPATTANA (TMC)	-	10	-
			_	
263	SIDDAPUR (TP)	-	7	1
264	SIDLAGHATTA (TMC)	-	2	-

265	SINDGI (TMC)	1	16	1
266	SINDHNUR (CMC)	14	15	-
267	SIRA (CMC)	-	1	-
268	SIRALKOPPA (TP)	-	1	-
269	SIRAVARA (TP)	5	-	-
270	SIRSI (CMC)	-	23	-
271	SIRUGUPPA (TMC)	19	6	-
272	SOMESHWARA	1	1	-
273	SOMVARPET (TP)	-	3	-
274	SORAB (TP)	-	2	-
275	SRINGERI (TP)	-	4	-
276	SRINIVASPUR (TMC)	-	5	-
277	SRIRAMPURA	-	2	-
278	SULYA (TP)	5	3	-
279	TALIKOTA	2	1	-
280	TARIKERE (TMC)	2	10	-
281	TAVARAGERA (TP)	-	8	-
282	TEKKALAKOTE (TP)	16	1	-
283	TERDAL (TMC)	1	3	-
284	THIKOTA	1	1	-
285	TIPTUR (CMC)	-	7	-
286	TIRTHAHALLI (TP)	-	8	1
287	TIRUMAKUDAL NARSIPUR (TP)	1	5	-
288	TUMKUR	12	29	-
289	TURUVEKERE (TP)	-	1	-
290	TURUVIHAALA (TP)	2	2	-
291	UDUPI	1	42	-
292	UGAR KHURDA(TMC)	17	1	-
293	ULLAL (TMC)	-	5	-
294	VIJAYAPURA (TMC)	-	4	-
295	VIRAJPET (TP)	3	11	-
296	VITLA (TP)	-	6	-
297	WADI (TMC)	5	-	-
298	YADGIR (CMC)	10	3	-
299	YADRAMI	-	1	1
300	YARAGATTI	3	1	3
301	YELANDUR (TP)	7	1	-
302	YELLAPUR (TP)	-	5	-

#### b. Maharashtra:

In the state of Maharashtra, as per the data from Swachh Bharat Urban 2.0, a total of 418 cities are covered under the sanitation initiative. The state has 3,964 community toilets, which provide shared sanitation facilities, mainly in densely populated areas and slums. Additionally, there are 7,504 public toilets, ensuring accessibility for the general public in urban centers, transport hubs, and marketplaces. To further support sanitation infrastructure, 478 urinals have been installed across various locations to cater to public convenience, particularly in high-traffic areas.

 Table 18: Public and Community toilets in Maharashtra state.

Slno	Urban Local body	<b>Community Toilets</b>	<b>Public Toilets</b>	Urinals
1	ACHALPUR	7	2	-
2	AHERI	-	3	-
3	AHMEDANAGAR	7	12	-
4	AHMEDNAGAR CANTT	4	1	-
5	AHMEDPUR	-	14	-
6	AJARA (NP)	-	7	-
7	AKKALKOT	1	2	-
8	AKLUJ	8	1	-
9	AKOLA	-	52	-
10	AKOLE	6	12	-
11	AKOT	3	1	-
12	ALANDI	-	14	-
13	ALIBAG	8	7	-
14	AMALNER	-	29	8
15	AMBAD	-	2	-
16	AMBAJOGI	-	2	-
17	AMBARNATH	41	33	-
18	AMGAON (NP)	4	4	-
19	AMRAVATI	-	11	2
20	ANGAR	-	2	-
21	ANJANGAON SURJI	8	2	-
22	ARDHARPUR	-	2	-
23	ARJUNI	-	3	3
24	ARMORI	-	6	-
25	ARNI	1	4	-
26	ARVI	-	2	-
27	ASHTA_MH	13	3	3
28	ASHTI_B	1	1	-
29	ASHTI_W	1	3	-
30	ATPADI	1	2	2
31	AUNDHA	-	3	-
32	AURANGABAD	7	22	1
33	AURANGABAD CANTT	-	2	-
34	AUSA	-	3	-
35	BABHULGAON	-	2	-
36	BADNAPUR	-	1	-
37	BADRAVATI	-	7	-
38	BALAPUR	-	2	-
39	BALLARPUR	-	15	-
40	BARAMATI	14	29	-
41	BARSHI	6	9	-

42	DADGIH TAKLI			
42	BARSHI TAKLII	-	2	-
43	BASMAT	-	12	-
44	BEED	-	3	-
45	BHADGAON	-	12	1
46	BHAGUR	2	-	4
47	BHAMRAGAD	-	2	-
48	BHANDARA	-	16	-
49	BHATAKULI	-	2	-
50	BHISHI	-	1	-
51	BHIWANDI NIZAMPUR	292	48	7
52	BHIWAPUR	-	3	-
53	BHOKAR	-	11	-
54	BHOKARDAN	-	2	-
55	BHOR	14	1	4
56	BHUM	-	5	-
57	BHUSAWAL	-	35	6
58	BILOLI	-	2	-
59	BODWAD	-	9	-
60	BRAHMAPURI	-	9	-
61	BULDANA	-	7	-
62	BUTIBORI (NP)	-	2	1
63	CHAKAN	3	7	-
64	CHAKUR	-	2	-
65	CHALISGAON	-	5	-
66	CHAMORSI	-	3	2
67	CHANDGAD (NP)	1	1	-
68	CHANDRAPUR_M	16	13	-
69	CHANDUR BAAZAR	-	2	-
70	CHANDUR RAILWAY	1	1	-
71	CHANDWAD	9	3	1
72	CHIKHALDARA	-	2	-
73	CHIKHLI	4	1	-
74	CHIMUR	-	2	-
75	CHIPLUN	11	1	1
76	CHOPADA	-	3	-
77	DAHANU	9	2	1
78	DAHIWADI	4	1	-
79	DAPOLI CAMP	1	9	1
80	DARWHA	1	3	-
81	DARYAPUR	-	5	-
82	DATTAPUR DHAMANGAON	1	3	-
83	DAUND	4	3	2
84	DEGLUR	1	4	-
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85	DEHU	2	2	-
86	DEHUROAD CANTT	3	3	-
87	DEOLA	1	1	-
88	DEOLALI CANTT	-	8	-
89	DEOLALI PRAVARA	-	8	-
90	DEOLI_W	-	3	1
91	DEONI	2	-	-
92	DEORI_G	1	8	-
93	DESAIGANJ	-	3	-
94	DEULGAON RAJA	-	7	1
95	DEVGAD	22	3	-
96	DEVRUKH	1	1	2
97	DHADGAON WADFALYA	-	7	-
98	DHANKI	-	3	-
99	DHANORA	-	3	-
100	DHARANGAON	-	11	-
101	DHARMABAD	-	2	-
102	DHARNI	-	3	-
103	DHARUR	2	-	-
104	DHULE	-	48	-
105	DIGRAS	2	2	-
106	DINDORI_N	3	6	-
107	DOUNDAICHA WARWADE	-	10	2
108	DUDHANI	-	6	-
109	ERANDOL	-	7	6
110	ETAPALLI	-	4	-
111	FAIZPUR	2	6	-
112	GADCHANDUR	-	13	-
113	GADCHIROLI	-	1	-
114	GADHINGLAJ	-	30	-
115	GANGAKHED	-	4	1
116	GANGAPUR_A	-	3	-
117	GEORAI	2	2	-
118	GHANSAWANGI	-	4	-
119	GHATANJI	-	2	-
120	GHUGGHUS	-	3	-
121	GONDIYA	-	4	-
122	GOND PIPARI	1	2	-
123	GOREGAON	-	20	-
124	GREATER MUMBAI	1532	1612	15
125	GUHAGAR	5	1	-
126	HADGAON	-	7	-

127	HATKANGALE (NP)	-	3	-
128	HIMAYATNAGAR		7	-
129	HINGANA	-	2	-
130	HINGANGHAT	5	4	4
131	HINGOLI	-	6	2
132	HUPARI (NP)	2	_	_
133	ICHALKARANJI	-	71	-
134	IGATPURI	12	5	-
135	INDAPUR	8	1	2
136	JAFRABAD	-	3	-
137	JALGAON	7	12	-
138	JALGAON JAMOD	-	6	-
139	JALKOT	-	7	-
140	JALNA	10	3	-
141	JAMKHED	1	9	1
142	JAMNER	-	9	-
143	JATH	1	11	-
144	JAWHAR	7	1	-
145	JAYSINGPUR	-	7	-
146	JEJURI	-	17	-
147	JINTUR	-	8	-
148	JIVATI	-	2	-
149	JUNNAR	10	4	1
150	KADEGAON	-	5	-
151	KAGAL	-	8	-
152	KAIJ	5	2	-
153	KALAMB_O	-	9	-
154	KALAMB_Y	1	1	-
155	KALAMESHWAR	1	1	-
156	KALAMNURI	-	4	-
157	KALWAN	-	9	-
158	KALYAN DOMBIVALI	25	106	1
159	KAMPTEE	1	3	-
160	KAMPTEE CANTT	13	6	-
161	KANDHAR	-	6	-
162	KANHAN-PIPRI	-	2	-
163	KANKAVLI	5	7	-
164	KANNAD	-	1	-
165	KARANJA	-	2	-
166	KARANJA_WAS	-	10	2
167	KARHAD	23	11	-
168	KARJAT_A	3	3	-
169	KARJAT_R	9	2	2
170	KARMALA	25	6	-

171	KASAI DODAMARG	-	2	-
172	KATOL	-	3	-
173	KAVATHE MAHANKAL	3	7	-
174	KHALAPUR	4	4	-
175	KHAMGAON	-	3	-
176	KHANAPUR_M	2	1	-
177	KHANDALA	4	1	-
178	KHAPA	1	1	-
179	KHED	3	2	1
180	KHOPOLI	47	10	-
181	KHULDABAD	-	2	-
182	KINWAT	-	4	-
183	KIRKEE CANTT	3	11	2
184	KOLHAPUR	2	316	60
185	KOPARGAON	28	3	-
186	KORCHI	-	4	-
187	KOREGAON	9	2	-
188	KORPANA	-	3	-
189	KUDAL	-	3	-
190	KUHI	-	3	-
191	KULGAON-BADLAPUR	40	9	4
192	KUNDALWADI	-	7	-
193	KURDUVADI	-	6	-
194	KURKHEDA	-	7	1
195	KURUNDVAD	1	7	4
196	LAKHANDUR	-	6	-
197	LAKHANI	-	9	-
198	LANJA	1	3	-
199	LATUR	-	11	-
200	LOHA	-	2	-
201	LOHARA B.	-	4	-
202	LONAND	-	16	-
203	LONAR	-	2	-
204	LONAVALA	30	9	1
205	MADHA	-	2	-
206	MAHABALESHWAR	5	5	-
207	MAHAD	4	2	-
208	MAHADULA	-	1	-
209	MAHAGAON	-	8	-
210	MAHALUNG SHRIPUR	1	1	-
211	MAHUR	-	3	-
212	MAINDARGI	1	6	-
213	MAJALEGAON	2	2	-

214	MALEGAON	26	11	2
215	MALEGAON ZAHANGIR	-	3	-
216	MALEGAON	2	1	-
217	MALKAPUR_B	-	5	-
218	MALKAPUR_K	12	4	-
219	MALKAPUR_S	3	6	3
220	MALSHIRAS	10	1	-
221	MALWAN	2	3	-
222	MANCHAR	2	3	-
223	MANDANGAD	-	2	-
224	MANGALVEDHE	-	11	-
225	MANGAON	-	6	-
226	MANGLURPIR	2	5	-
227	MANMAD	8	17	-
228	MANORA	-	2	-
229	MANTHA	-	4	-
230	MANWAT	1	5	-
231	MAREGAON	-	1	-
232	MATHERAN	3	6	-
233	MAUDA CT	3	5	-
234	MEDHA	3	3	-
235	MEHKAR	-	3	-
236	MHASALA	-	1	-
237	MHASWAD	7	1	-
238	MIRA-BHAYANDAR	-	197	-
239	MOHADI	-	3	-
240	MOHOL	-	5	-
241	MOHPA	1	2	-
242	MOKHADA	10	1	-
243	MORSHI	-	4	-
244	MOTALA	1	1	-
245	MOWAD	-	6	-
246	MUDKHED	-	6	-
247	MUKHED	-	4	-
248	MUKTAI NAGAR (NP)	-	1	-
249	MUL	2	2	-
250	MULCHERA	-	1	-
251	MURBAD	-	7	-
252	MURGUD	-	9	-
253	MURTIZAPUR	-	2	-
254	MURUD-JANJIRA	6	2	-
255	MURUM	-	4	-
256	NAGBHID	-	5	4
257	NAGPUR	13	78	1
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258	NAIGAON	-	3	-
259	NALDURG	-	6	-
260	NANDED WAGHALA	-	15	-
261	NANDGAON	3	1	1
262	NANDGAON KHANDESHWAR	-	4	1
263	NANDURA	-	4	1
264	NANDURBAR	-	109	-
265	NARKHED	-	6	-
266	NASHIK	10	25	3
267	NASHIRABAD	-	4	-
268	NATEPUTE	3	1	-
269	NAVI MUMBAI	272	126	11
270	NAWAPUR	-	15	2
271	NER	-	5	-
272	NEVASA	-	4	-
273	NILANGA	-	3	-
274	NIPHAD	3	13	2
275	OSMANABAD	-	11	-
276	OZAR	1	4	-
277	PACHORA	-	25	1
278	PAITHAN	-	4	-
279	PALAM	-	3	1
280	PALGHAR	-	22	-
281	PALI	1	4	-
282	PALUS	3	4	-
283	PANCHGANI	2	9	2
284	PANDHARKAODA	-	6	-
285	PANDHARPUR	-	9	-
286	PANHALA	-	6	-
287	PANVEL	34	50	-
288	PARANDA	4	1	-
289	PARBHANI	12	11	-
290	PARLI	-	5	-
291	PARNER	-	6	-
292	PAROLA	-	18	-
293	PARSIVNI	-	4	-
294	PARTUR	-	4	-
295	PATAN_MH	1	1	-
296	PATHARDI	-	9	-
297	PATHRI	-	9	-
298	PATODA	1	1	-
299	PATUR	-	3	-
300	PAUNI	-	2	-
301	PEN	2	22	-
302	PETH	2	2	-

303	PETH UMRI_N	-	3	-
304	PHALTAN	16	1	3
305	PHULAMBRI	-	1	-
306	PIMPRI CHINCHWAD	207	164	72
205	DOL 4 DRUB			
307	POLADPUR	4	-	-
308	POMBHURNA	-	7	-
309	PULGAON	-	6	-
310	PUNE	505	1080	85
311	PUNE CANTT	4	40	-
312	PURNA	-	7	-
313	PUSAD	-	5	-
314	RAHIMATPUR	19	3	-
315	RAHTA PIMPLAS	1	14	1
316	RAHURI	-	7	-
317	RAJAPUR	5	3	-
318	RAJGURU NAGAR	5	2	-
319	RAJURA	-	5	-
320	RALEGAON	-	1	-
321	RAMTEK	-	5	-
322	RATNAGIRI	10	5	4
323	RAVER	-	5	-
324	RENAPUR	-	2	3
325	RISOD	-	6	2
326	ROHA ASHTAMI	4	4	-
327	SADAK ARJUNI	-	4	-
328	SAILU	-	7	-
329	SAKOLI	-	3	1
330	SAKRI	-	11	1
331	SALEKASA	5	2	-
332	SAMUDRAPUR	-	2	-
333	SANGAMNER	-	13	-
334	SANGLI	25	11	18
335	SANGOLE	-	7	-
336	SANGRAMPUR	-	2	1
337	SAOLI	-	6	-
338	SASVAD	5	3	3
339	SATANA	-	6	-
340	SATARA	14	12	-
341	SAVDA	-	12	2
342	SAVNER	2	2	-
343	SAWANTWADI	14	2	-
344	SELU		5	4
345	SENGAON		4	-
346	SHAHADA	3	8	-
347	SHAHPUR_T	1	1	-
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348	SHEGAON	4	11	-
349	SHENDURJANAGHAT	-	4	1
350	SHENDURNI (NP)		4	_
351	SHEVGAON	-	6	-
352	SHIRALA	4	5	2
	SHIRALA			
353		2	10	-
354	SHIROL (NP)		1.4	-
355	SHIRPUR- WARWADE	-	14	4
356	SHIRUR	10	2	-
357	SHIRUR ANANTPAL	-	5	-
358	SHIRUR KASAR	-	3	-
359	SHRIGONDA	5	9	_
360	SHRIRAMPUR		10	3
361	SHRIWARDHAN	4	3	-
362	SILLOD	<u> </u>	7	-
363	SINDEWAHI		3	-
364	SINDHKHEDA	-	12	-
365	SINDI	1	2	-
366	SINDKHED RAJA	-	2	_
367	SINNAR	20	3	-
368	SIRONCHA	-	3	
369	SOLAPUR	<u>-</u> 11	38	-
370	SONPETH		5	
	SOYGAON	-		-
371	SURGANA	-	9	-
372		- 1		-
373	TALAGARI	1	1	1
374	TALASARI	-	1	-
375	TALEGAON DABHADE	1	4	-
376	TALODE	-	16	4
377	TASGAON	3	6	-
378	TELHARA	1	1	-
379	TEOSA	-	3	-
380	THANE	-	841	12
381	TIRORA	-	2	-
382	TIRTHPURI	-	1	-
383	TRIMBAK	9	7	-
384	TULJAPUR	10	5	-
385	TUMSAR	-	6	-
386	UDGIR	9	11	-
387	ULHASNAGAR	21	27	20
388	UMARGA	-	6	-
389	UMARKHED	-	6	-
390	UMRED	3	1	-

391	URAN	5	4	2
392	URAN ISLAMPUR	-	22	1
393	VADGAON	7	2	-
394	VADGAON MAVAL (NP)	4	2	2
395	VAIBHAVWADI	-	1	-
396	VAIJAPUR	1	5	3
397	VAIRAG	-	4	-
398	VARANGAON	-	12	-
399	VASAI VIRAR	-	318	4
400	VASHI	-	4	-
401	VENGURLA	-	17	-
402	VIKRAMGAD	-	3	-
403	VITA	10	8	4
404	WADA (NP)	18	-	1
405	WADAVANI	-	1	-
406	WADI	-	3	-
407	WADUJ	4	3	2
408	WAI	11	3	4
409	WANADONGRI	-	2	-
410	WANI	-	4	2
411	WARDHA	1	3	4
412	WARORA	-	8	-
413	WARUD	1	1	1
414	WASHIM	8	8	-
415	YAVATMAL	1	13	1
416	YAWAL	-	5	-
417	YEOLA	-	4	-
418	ZARI	-	2	-
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## c. Andhra Pradesh:

In the state of Andhra Pradesh, as per data from the Swachh Bharat Urban 2.0 initiative, a total of 124 cities and towns have been brought under the umbrella of this nationwide sanitation mission. This extensive coverage reflects the state's commitment to improving urban cleanliness and promoting hygienic living conditions. To cater to the needs of urban populations, especially in areas where private sanitation facilities are inadequate or unavailable, the state has established 718 community toilets. These toilets are mostly located in densely populated localities and slum areas, offering shared sanitation access to marginalized communities and helping reduce open defectation. In addition to community toilets, Andhra Pradesh has developed a network of 1,040 public toilets. These are strategically placed in urban centers, transport hubs like bus stands and railway stations, and busy commercial areas such as markets. This ensures that people have easy and safe access to sanitation facilities while they are on the move. Furthermore, to enhance public convenience, especially in high-footfall areas, 41 urinals have been installed across various cities. These serve as a quick and accessible option for sanitation, particularly for pedestrians and commuters.

 Table 19: Public and Community toilets in Andhra Pradesh state.

Sl no	Urban Local body	Community Toilets	<b>Public Toilets</b>	Urinals
1	ADDANKI	1	4	-
2	ADONI	3	17	-
3	AKIVEEDU	-	1	-
4	ALLAGADDA	-	1	-
5	ALLURU	-	1	-
6	AMADALAVALASA	8	4	-
7	AMALAPURAM	-	11	-
8	ANANTAPUR	-	32	-
9	ATMAKUR_K	2	3	-
10	ATMAKUR_N	-	9	1
11	BADVEL	-	9	-
12	BAPATLA	-	5	-
13	BETHAMCHERLA	-	3	-
14	BHIMAVARAM	-	6	-
15	В КОТНАКОТА	-	2	-
16	BOBBILI	8	3	-
17	BUCHIREDDYPALEM	-	1	-
18	CHILAKALURIPET	2	11	-
19	CHIMAKURTHY	1	3	-
20	CHINTALAPUDI	-	1	-
21	CHIRALA	1	13	-
22	CHITTOOR	10	14	-
23	DACHEPALLI	-	2	-
24	DARSI	-	1	-
25	DHARMAVARAM	-	5	-
26	DHONE	-	2	-
27	ELURU	13	27	-
28	GIDDALURU	-	3	-
29	GOLLAPROLU	1	1	-
30	GOOTY	10	1	-
31	GUDIVADA	-	10	-
32	GUDUR	1	14	-
33	GUDURU	-	4	-
34	GUNTAKAL	6	11	-
35	GUNTUR	-	34	-
36	GURAJALA	-	1	-
37	GVMC VISAKHAPATNAM	184	87	-
38	HINDUPUR	2	14	-
39	ICHCHAPURAM	-	2	-
40	JAGGAIAHPET	-	5	-
41	JAMMALAMADUGU	-	7	-
42	JANGAREDDYGUDEM	-	3	-
43	KADAPA	7	26	-

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44	KADIRI	-	2	-
45	KAKINADA	22	14	2
46	KALYANDURGAM	-	12	-
47	KAMALAPURAM	-	3	-
48	KANDUKUR	-	5	-
49	KANIGIRI	-	2	-
50	KAVALI	3	7	-
51	KONDAPALLI	1	1	-
52	KOVVUR	1	7	-
53	KUPPAM	1	1	-
54	KURNOOL	82	17	-
55	MACHERLA	1	2	-
56	MACHILIPATNAM	2	3	-
57	MADAKASIRA	-	4	-
58	MADANAPALLE	-	8	-
59	MANDAPETA	10	2	_
60	MANGALAGIRI	1	6	_
61	MARKAPUR	4	8	_
62	MUMMIDIVARAM	1	2	_
63	MYDUKUR	<u>-</u>	6	_
64	NAGARI	<u>-</u>	8	_
65	NAIDUPET		7	_
66	NANDIGAMA	1	2	_
67	NANDIKOTKUR	2	3	_
68	NANDYAL	46	7	_
69	NARASAPUR	6	4	_
70	NARASARAOPET	1	14	_
71	NARSIPATNAM	5	3	1
72	NELLIMARLA	4	1	
73	NELLORE	7	23	8
		•		
74	NIDADAVOLE	-	13	-
75	NUZIVID	- 12	2	-
76	ONGOLE	13	30	-
77	PALACOLE	6	5	-
78	PALAKONDA	4	3	-
79	PALAMANERU	-	11	-
80	PALASA KASIBUGGA	2	2	-
81	PARVATHIPURAM	7	10	-
82	PEDANA	1	3	-
83	PEDDAPURAM	2	3	2
84	PENUKONDA	-	1	-
85	PIDUGURALLA	-	5	-
86	PITHAPURAM	6	5	-
87	PODILI	-	1	-
88	PONNUR	2	3	-
89	PRODDATUR	3	8	-
90	PULIVENDULA	-	13	-
91	PUNGANUR	5	8	_

92	PUTTAPARTHI	-	7	-
93	PUTTUR	-	6	1
94	RAJAHMUNDRY	19	31	5
95	RAJAM	7	1	-
96	RAJAMPETA	1	5	-
97	RAMACHANDRAPURAM	8	3	-
98	RAYACHOTY	-	8	-
99	RAYADURG	1	5	-
100	REPALLE	2	9	-
101	SALUR	33	2	-
102	SAMALKOT	9	13	-
103	SATTENAPALLI	1	6	-
104	SRIKAKULAM	24	6	-
105	SRIKALAHASTI	-	8	-
106	SULLURPET	1	14	-
107	TADEPALLI	3	3	-
108	TADEPALLIGUDEM	-	14	1
109	TADIPATRI	5	21	4
110	TANUKU	17	6	-
111	TENALI	8	13	-
112	TIRUPATI	14	26	2
113	TIRUVURU	1	10	-
114	TUNI	1	5	-
115	VENKATAGIRI	-	8	-
116	VIJAYAWADA	15	50	14
117	VINUKONDA	-	5	-
118	VIZIANAGARAM	25	6	-
119	VUYYURU	-	6	-
120	YELAMANCHILI	3	1	-
121	YELESWARAM	4	5	-
122	YEMMIGANUR	4	4	-
123	YERRAGUNTLA	-	7	-
124	YSR TADIGADAPA	-	2	-

## d. Telangana State:

As per the data from the Swachh Bharat Urban 2.0 initiative, the state of Telangana has taken noteworthy steps towards improving urban sanitation across 143 cities and towns. The state has set up 74 community toilets to support sanitation needs in areas where access to individual household toilets is limited, especially in urban slums and crowded localities. In a strong move to enhance public hygiene, Telangana has also established a robust network of 1,399 public toilets, strategically located in bus stations, markets, and other high-footfall areas to serve the general population. Additionally, 24 urinals have been installed in key urban spots to provide quick and accessible facilities, particularly for people on the move. These efforts highlight the state's dedication to building a cleaner and more hygienic urban environment.

 Table 20: Public and Community toilets in Telangana state.

Sl no	Urban Local body	Community Toilets	<b>Public Toilets</b>	Urinals
1	ADIBATLA	Tonets	4	
2	ADIBATEA	-	4	_
3	ALAM		6	
4	AMANGAL	_	13	
5	AMARCHINTA	_	1	_
6	AMEENPUR	_	6	_
7	ANDOLE-JOGIPET(NP)	_	4	_
8	ARMOOR (M)	_	4	_
9	ATCHAMPET(NP)	_	4	_
10	ATMAKUR	_	4	_
11	BADANGPET(NP)	_	14	_
12	BADLAGUDA JAGIR	_	6	_
13	BANSWADA	_	7	_
14	BELLAMPALLE (M)	-	8	-
15	BHEEMGAL	-	2	-
16	BHONGIR (M)	-	4	-
17	BHOOTPUR	-	2	-
18	BODHAN (M)	-	9	-
19	BOD UPPAL	-	12	-
20	BOLLARAM	-	6	-
21	CHANDUR	-	4	-
22	CHENNUR	-	3	-
23	CHERIAL	-	5	-
24	CHITYAL	-	4	-
25	CHOPPANDANDI	-	2	-
26	CHOUTUPPAL	-	4	-
27	DEVARAKONDA(NP)	-	5	-
28	DHAMMAIGUDA	-	6	-
29	DHARMPURI	-	4	-
30	DORNAKAL	-	3	-
31	DUBBAKA(NP)	-	5	-
32	DUNDIGAL	-	12	-
33	GADWAL	-	7	-
34	GAJWEL	-	7	-
35	GREATER HYDERABAD	-	300	16
36	HALIYA	-	2	-
37	HUSNABAD	-	6	-
38	HUZURABAD	-	5	-
39	HUZURNAGAR(NP)	-	4	-
40	IBRAHIMPATNAM(NP)	-	6	-
41	IEEJA(NP)	-	9	-
42	JADCHERLA	-	6	-
43	JAGTIAL	-	9	-

44	JAMMIKUNTA(NP)	-	6	-
45	JANGAON	-	12	-
46	KALWAKURTHY	-	9	_
47	KAMAREDDY	-	12	-
48	KHAMMAM	-	34	1
49	KODANGAL	-	2	_
50	KOLLAPUR(NP)	-	9	_
51	KOMPALLY	-	1	_
52	KORTULLA (M)	-	8	_
53	KOSGI	_	4	_
54	KOTHAGUDEM (M)	_	10	_
55	KOTHAKOTA	_	4	_
56	KOTHAPALLY	_	3	_
57	KOTHUR	_	1	_
58	KYATHANPALLY	_	6	_
59	LUXETTIPET	_	2	2
60	MADHIRA(NP)	_	6	_
61	MAHABUBABAD	_	8	_
62	MAHBUBNAGAR	_	11	_
63	MAKTHAL	-	3	_
64	MANCHERIAL	-	17	_
65	MANIKONDA	-	5	_
66	MANTHANI	-	2	_
67	MANUGUR (M)	-	5	-
68	MARIPEDA	-	3	-
69	MEDAK (M)	-	4	-
70	MEDCHAL(NP)	-	8	-
71	MEERPET	-	7	-
72	METPALLI (M)	-	10	-
73	MIRYALAGUDA	-	25	-
74	MOTHKUR	-	5	-
75	NAGARAM	-	10	-
76	NAGARKURNOOL(NP)	-	5	-
77	NAKREKAL	-	2	-
78	NANDIKONDA	-	3	-
79	NARAYANKHED	-	4	-
80	NARSAPUR	-	4	-
81	NARSINGI	-	6	-
82	NASPUR	-	7	-
83	NEREDCHERLA	-	3	-
84	NIRMAL	-	18	-
85	NIZAMABAD	-	43	-
86	NIZAMPET	-	9	-
87	PALWANCHA	-	10	-
88	PARIGI	-	2	-
89	PARKALA(NP)	-	9	-
90	PEBBAIR	-	4	-
91	PEDDAPALLI	-	6	-

POCHAMPALLY	-	3	-
POCHARAM	_		_
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	_	16	2
ADILABAD	1	9	_
BHAINSA (M)	1	12	-
	1	16	-
GHATKESAR	1	5	-
JALLPALLY	1	7	-
KODADA	1	8	-
NALGONDA	1	26	-
NARAYANPET (NP)	1	10	-
PEDDA AMBERPET	1	11	-
PEERZADIGUDA	1	10	-
SATHUPALLE (NP)	1	9	-
SECUNDERABAD CANTT.	1	9	_
SULTANABAD	1	4	-
THORRUR	1	2	-
GUNDLAPOCHAMPALLY	2	2	-
JAWAHAR NAGAR	2	4	-
KARIMNAGAR	2	23	_
NARSAMPET(NP)	2	5	-
TURKAYAMJAL	2	5	
KHANAPUR	3	2	-
KAGAZNAGAR	4	9	2
SURYAPET	5	17	_
	POCHARAM RAIKAL RAMAYAMPET SADASIVPET (M) SANGAREDDY SHADNAGAR SHAMSHABAD SHANKARPALLY SIDDIPET (M) SIRCILLA TANDUR (M) TELLAPUR THOOPRAN THUKKUGUDA THUMKUNTA TIRUMALAGIRI VEMULAWADA(NP) VIKARABAD (M) WADDEPALLE WARDHANNAPET WYRA YADAGIRIGUTTA YALLAREDDY YELLANDU ZAHEERABAD ADILABAD BHAINSA (M) BHUPALPALLI(NP) GHATKESAR JALLPALLY KODADA NALGONDA NARAYANPET (NP) PEDDA AMBERPET PEERZADIGUDA SATHUPALLE (NP) SECUNDERABAD CANTT. SULTANABAD THORRUR GUNDLAPOCHAMPALLY JAWAHAR NAGAR KARIMNAGAR NARSAMPET (NP) TURKAYAMJAL KHANAPUR KAGAZNAGAR	POCHARAM RAIKAL RAMAYAMPET SADASIVPET (M) SANGAREDDY SHADNAGAR SHAMSHABAD SHANKARPALLY SIDDIPET (M) SIRCILLA TANDUR (M) TELLAPUR THOOPRAN THUKKUGUDA THUKKUGUDA TIRUMALAGIRI VEMULAWADA(NP) VIKARABAD (M) WADDEPALLE WARDHANNAPET WYRA YADAGIRIGUTTA YALLAREDDY YELLANDU ZAHEERABAD ADILABAD BHAINSA (M) BHUPALPALLI(NP) GHATKESAR JALLPALLY KODADA NARAYANPET (NP) PEDDA AMBERPET PEERZADIGUDA SATHUPALLE (NP) SECUNDERABAD CANTT. SULTANABAD THORRUR GUNDLAPALLE (NP) SECUNDERABAD CANTT. SULTANABAD THORRUR GUNDLAPALLE (NP) SECUNDERABAD THORRUR GUNDLAPALLY SCHOOL THE CONTROL OF THE CONTROL SECUNDERABAD THORRUR GUNDLAPALLY SCHOOL THE CONTROL SATHUPALLE (NP) SECUNDERABAD CANTT. SULTANABAD THORRUR GUNDLAPOCHAMPALLY JAWAHAR NAGAR KARIMNAGAR NARSAMPET (NP) TURKAYAMJAL KHANAPUR SAGAZNAGAR	POCHARAM RAIKAL RAMAYAMPET RAIKAL RAMAYAMPET RAMAYAMPALY RAMAYAMAARALLY RAMAYAMAARA RAMAYAMARA RAM

140	WANAPARTHY	6	11	-
141	MANDAMARRI (M)	7	1	-
142	WARANGAL	7	55	-
143	RAMAGUNDAM	18	7	-

## • Solid Waste Management (Dry Waste Processing Plan)

The report provides data on solid dry waste management facilities, particularly Material Recovery Facilities (MRFs), in districts across the Krishna River Basin. It also discusses the status of waste-to-energy plants. Waste-to-energy plants in major urban centers have significant energy recovery potential, contributing to sustainable waste management efforts.

- A. *Automation vs Manual*: Some districts within the Krishna Basin, such as Pune and Hyderabad, are advancing towards automation in waste management, whereas rural districts like Raichur and Bagalkot still depend largely on manual processing. Mixed districts like Vijayapura and Kolhapur reflect transitional strategies, integrating both manual and automated approaches.
- B. *Urban vs Rural*: Urban districts, including Bengaluru and Hyderabad, utilize semi-automated waste processing systems. However, certain urban areas still have manual facilities in operation. Rural districts, such as Gadag and Kurnool, remain dependent on manual methods, highlighting the need for improved infrastructure and mechanization.

## **Conclusion**

This report provides crucial insights for policymakers to tackle infrastructure challenges and promote environmental sustainability within the Krishna Basin. By identifying gaps in waste management and sanitation, it enables informed decision-making to address regional needs effectively. Tailored strategies can be developed for each city and district, ensuring optimal resource allocation, prioritization of projects, and targeted interventions to bridge disparities in access to essential services such as waste management, clean water, and sanitation. These efforts are vital for enhancing public health, reducing disease prevalence, and fostering equitable and sustainable development across the Krishna Basin. Including river infrastructure details in the report is of critical importance for policymakers, as it provides a comprehensive understanding of existing structures such as dams, barrages, canals, and reservoirs within the Krishna Basin. This data enables policymakers to assess the efficiency and capacity of these infrastructures in supporting water resource management, including irrigation, hydropower generation, and flood control. It helps identify areas where maintenance, modernization, or new construction is required to optimize the use of the river's resources while ensuring the resilience of infrastructure to climate change impacts.

Furthermore, infrastructure data plays a crucial role in regional planning and inter-state coordination, ensuring equitable water distribution among Karnataka, Maharashtra, Telangana, and Andhra Pradesh, while also complying with environmental regulations. By leveraging these insights, policymakers can formulate sustainable development policies that enhance economic growth, improve water security, and safeguard the Krishna River as a vital lifeline for the region. The report provides a data-driven foundation for designing holistic and sustainable developmental strategies within the Krishna Basin. With detailed insights into waste management, including collection, treatment, and disposal processes, policymakers can implement efficient disposal systems that help mitigate environmental pollution, enhance urban hygiene, and protect the Krishna River ecosystem. Additionally, the report offers actionable insights on water supply networks, ensuring equitable and reliable access to clean drinking water across cities within the basin. Sewerage network plans allow policymakers to tackle sanitation challenges, reduce waterborne diseases, and enhance public health. Data on public toilets further supports hygiene promotion, particularly in urban and peri-urban areas, aligning with national initiatives such as "Swachh Bharat Abhiyan".

By incorporating these findings into policy frameworks, leaders can ensure sustainable urbanization, improve quality of life, and safeguard the environmental and economic health of the Krishna Basin for future generations. These insights enable the development of innovative and sustainable cities tailored to the specific needs of urban centers within the basin. Furthermore, regional data sharing across cities fosters collaboration, encourages the adoption of best practices, and promotes balanced urban and rural development strategies. This integrated approach benefits both the environment and the well-being of communities dependent on the Krishna River.

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