



Urban Development and Housing Department
Government of Bihar

City Development Plan (2010-30)

ARRAH



EXECUTIVE SUMMARY

CDP Prepared By:

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and



Support Programme for Urban Reforms in Bihar

(A Government of Bihar Initiative)

Supported by DFID, United Kingdom

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संदेश

मुझे यह घोषणा करते हुए अति प्रसन्नता हो रही है कि नगर विकास ने राज्य के प्रमुख 28 शहरों की नगर विकास योजना (CDP) तैयार की है। यह विभाग के लिए विशेष उपलब्धि है क्योंकि ये नगर विकास योजनाएँ (CDPs) राज्य में नगरीय आधारभूत संरचनाओं पर होने वाले व्यय के लिए मील का पत्थर साबित होगी।

समग्र विकास की धारणा से राज्य में नगरीय विकास में बड़ा लाभ मिलेगा। ये नगर विकास योजनाएँ (CDPs) विस्तृत विचार विमर्श के बाद वर्ष 2010 से 2030 तक के लिए बनाई गई हैं। विचार विमर्श द्वारा एक दृष्टिकोण परिभाषित हुआ है जिसे परियोजनाओं (Projects) के रूप में परिवर्तित किया जाएगा। नगर विकास योजनाओं (CDPs) में न केवल 20 वर्षों में आधारभूत संरचनाओं की जरूरतों को परिभाषित किया है बल्कि नगर सुधार की जरूरतों एवं परियोजनाओं के क्रियान्वयन के लिए धन राशि की उपलब्धता के लिए स्रोत को भी दर्शाया गया है। सभी नगर विकास योजनाओं (CDPs) में नगरीय स्तर पर वित्तीय सुधार पर जोर दिया है जो दीर्घ काल में न केवल विकास की जरूरतों को पूरा करने में लाभप्रद होगा बल्कि निजी क्षेत्र द्वारा निवेश को आकृष्ट करने में मदद करेगा। नगर विकास योजनाएँ (CDPs) राज्य को आर्थिक क्रिया कलापों के केन्द्र के रूप में नगरीय क्षेत्र के विकास के लिए पथप्रदर्शक होंगी।

ये नगर विकास योजनाएँ ब्रिटिश सरकार के अन्तराष्ट्रीय विकास विभाग (DFID) द्वारा वित्त पोषित संवर्धन परियोजना (SPUR) के तहत बनाई हैं। "संवर्धन" परियोजना वृहद आर्थिक क्रिया कलापों एवं सेवाओं जो गरीबों के विकास में सहायक हो सकती हैं को केन्द्र में रखते हुए आर्थिक वृद्धि एवं गरीबी उन्मूलन में विशिष्ट योगदान के लिए शहरी क्षेत्रों को मजबूती प्रदान करने पर केन्द्रित है।

जन प्रतिनिधि के रूप में मेरी हार्दिक इच्छा है कि बिहार अग्रणी राज्य की श्रेणी में खड़ा हो जैसे प्राकृतिक एवं मानवीय संसाधन में अग्रणी, आर्थिक एवं मानवीय विकास में अग्रणी, ऐतिहासिक रूप से अग्रणी। अभी हम इस दिशा में एक छोटा सा कदम रख रहे हैं।

(प्रेम कुमार)



संदेश



हमें यह घोशणा करते हुए अति प्रसन्नता हो रही है कि आरा के दीर्घकालीन विकास के लिए समेकित दृष्टिकोण के साथ शहर की नगर विकास योजना (CDP) बन चुकी है। इस नगर विकास योजना में समेकित दीर्घकालीन कार्यनीति (दृष्टिकोण-2030) जो कि आगे अल्पकालीन, मध्यकालीन एवं अन्तकालीन कार्यनीति में विभाजित की गई है के साथ ही नगर निवेश योजना (CIP) का भी समावेश है। इस योजना के आधार पर आरा नगर निगम योजना में वर्णित प्राथमिकता आधारित चिन्हित परियोजनाओं के लिए भारत सरकार, राज्य सरकार, स्वयं के वित्तीय स्रोतों एवं अन्य वित्तीय स्रोतों से धन राशि प्राप्त कर सकेगा। नगर विकास योजना में विभिन्न क्षेत्रों की परिचालनीय कार्यनीति (Operational Strategy) एवं प्रत्येक व्यवहारिक क्षेत्र के क्रियान्वयन हेतु कार्य योजना शामिल है। इसके अतिरिक्त नगर विकास योजना (CDP) में शामिल वित्तीय क्रियान्वयन योजना (FOP) के अनुसार नगर निगम चिन्हित परियोजनाओं के क्रियान्वयन के लिए वित्तीय संसाधन उपलब्ध करा सकेगा।

यद्यपि नगर विकास योजना तैयार करने के लिए उच्च स्तरीय तकनीकी कार्य किया गया है तथापि नगर विकास योजना विस्तृत विचार विमर्श के बाद तैयार की गई है जिसमें शहर के सामाजिक एवं आर्थिक विकास में भागीदारी सुनिश्चित करने के लिए जन प्रतिनिधियों, नगर निकायों के पदाधिकारियों, सम्बन्धित संस्थाओं, नीति निर्धारकों, निजी क्षेत्र की संस्थाओं, नागरिक समितियों एवं जन साधारण के विचारों को शामिल किया गया है। नगर विकास योजना में आरा शहर के भविष्य एवं विभिन्न क्षेत्र की परिचालनीय कार्यनीति (Operational Strategy) के बारे में एक दृष्टिकोण को प्रस्तुत किया गया है और क्रियान्वयन योग्य कार्य योजना को दर्शाया गया है।

यह नगर विकास योजना, ब्रिटिश सरकार के अन्तर्राष्ट्रीय विकास विभाग (DFID) द्वारा वित्त पोषित संवर्धन कार्यक्रम के तहत बनाई गई है। आरा नगर निगम इस सहयोग के लिए DFID का आभारी है।

राधनम प्रवीन
21/11/2011
.....
(उपमहापौर)
आरा नगर निगम

अवधेश पाठ
21/11/2011
.....
(महापौर)
आरा नगर निगम

Overview

Arrah is the administrative headquarter of Bhojpur district as well as the only Class –I town in the district. It is the seventh most populated town in Bihar and ranks sixth in the state in terms of area. The Arrah Nagar Panchayat was established in 1929 and was upgraded to a Municipal Council in 2002 and to a Municipal Corporation in 2007.



The Arrah Municipal Corporation (AMC) covers an area of 30.97 sq. km. The town had 32 Wards as per the Census 2001 but following the realignment of ward boundaries in 2007; the town has 45 wards as on date. Arrah is well connected with other parts of the country by rail and road – it is located at a distance of 60 km by road from Patna. The town has no airport with the nearest being in Patna. The city serves as a regional hub for trading of vegetable and food-grains for the district. Arrah has a large base of educated population. There has been an increase in the literacy rate of the city in the past 3 decades as compared to the district. It has a high female literacy compared to the state average.

The competitive advantage of Arrah is in its good road connectivity with the state capital and its being a district headquarters. The presence of perennial sources of water like the Ganga and Son Rivers are major factors for the agri dependent economy.

The large unemployed workforce can be trained in various activities to support the industrial activities in the region and overall development of the city. Arrah is covered under the UIDSSMT and therefore has access to funds.



CITY VISION

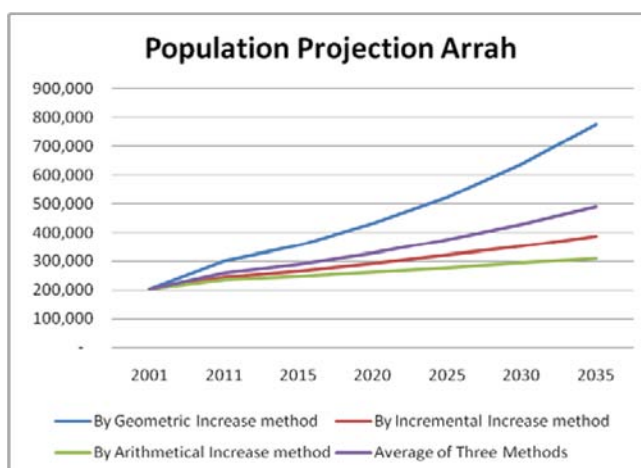
The Vision for Arrah has been derived through a participatory process taking into consideration the current assessment of the city, stakeholder consultations and focused group discussions. The identified Vision is as follows: ***“To transform Arrah into a vibrant regional economic hub with good quality services and infrastructure that enhances the quality of life of local citizens”***. The City Vision is an important step in the development of the CDP since it captures the aspirations of a city in the years to come. The Vision is the guide to deciding sector-specific approach, action planning and phasing of interventions.

Demography

The population of Arrah city was 2,03,380 as per the 2001 census – this accounts for about 9.07% of the total population of the district. The population density of the city is about 6,567 persons per sq km. The town has seen a fluctuation in growth rate attributable to migration from surrounding villages largely because of increase in trade and commerce.

The decadal growth rate of population was 34.64% in 1971-81. There has been a decline in population growth during 1981-1991 and again increase during 1991-2001. This growth in 1991-2001 may be due to the formation of a separate Bhojpur district in 1992 and selection of Arrah as the district headquarters and the centre of trade and commerce.

For the purposes of the CDP, population projections have been made based on available figures from Census 1961 to 2001. Three different methods have been used - geometric increase method, incremental increase method and arithmetic increase method. The results of the geometric method seem to be on the higher side whereas results using the other two methods are on the low side. Therefore the average of the three projection results has been considered as current population – this virtually matches with the preliminary data of the ongoing Census 2011. As per the projections, it is estimated that Arrah will have a population of 490,828 by 2035.



Sector Assessments & Growth Strategies

A) Water Supply

Water supply in the town is entirely ground water based. Ground water is extracted through 15 high yielding bore-wells that supply around 9 MLD of water or 35.43 lpcd as per 2010 projected population. The existing storage capacity of 2.95 ML is not adequate to support the present population of the town. Arrah has eight over head tanks (OHT) into which water is directly pumped. From here, the water gets distributed to parts of the town through a network that was laid in 1954. The pipeline network covers only 8,410 households or 24% of the town. The Municipal Corporation and PHED have provided around 185 public stand posts and 922 hand-pumps. As is the practice in the state, there are no user charges and water tax is collected as part of the Holding Tax.

Vision: To ensure access to safe water supply including drinking water to all.

Strategies: To achieve the sector vision and in line with the current assessment of the sector, demand and supply projections have been done. Thereafter, the detailed project requirements for both refurbishments of the existing system and augmentation of the system have been proposed. The short term interventions include moderate augmentation of treatment components and distribution service levels to ensure equitable supply. The medium and long term recommendations include a detailed consumer level survey, source augmentation to meet the future requirements of 45 MLD, reducing NRW to 20 percent, setting up chlorination units, construction of new storage reservoirs, expanding and strengthening the distribution network and replacing old pipelines, protection of water bodies including rain water harvesting and regulatory measures for ground water extraction and use. The CDP also suggests exploring the possibility of a regional water supply scheme. Additionally, the municipal capacity should be strengthened to take over responsibility for the water supply function from the PHED as mandated under the 74th CAA.

Projects	Unit	Phase I (2011-16)		Phase II (2016-21)		Phase III (2021-30)	
		Quantity	Cost (Rs. Crore)	Quantity	Cost (Rs. Crore)	Quantity	Cost (Rs. Lakh)
Rising mains	KM	2.8	1.52	6.5	7.40	6.7	17.73
Distribution Network	KM	15.9	3.94	37.1	19.19	34.7	46.00
Chlorination Unit	MLD	20.0	5.25	40.0	21.80	20.0	22.44
Strengthening of Existing Network	Km	30.7	2.04	-	-	-	-
Metering and Control Mechanism	No.	12,613	1.50	28,493	4.89	37,813	10.21
Storage Capacity Augmentation	ML	4.0	6.63	10.0	32.19	9.0	69.17
Source Augmentation			2.76		-		-
Planning Studies			0.44		0.10		0.10
Sub Total			24.08		85.57		165.65
Grant Total					Rs. 275.30 crores		

B) Sewerage and Sanitation

Arrah does not have an organised sewerage system leading to improper discharge of effluents from septic tanks and sullage into storm water drains and ultimately into the river. The town has nine major drainage outfalls that serve as a conduit for discharge of the domestic wastewater, sewerage and surface runoff into the Ganga River. The infiltration of rainwater into the sewerage lines and absence of segregated sewerage and storm water drains causes problems that are aggravated in the monsoons. The municipal corporation has no reliable updated database on number of properties having toilets and information on their connectivity to the disposal system. Estimates available from surveys conducted under the Integrated Low Cost Sanitation (ILCS) project show a very high rate of open defecation – estimated at 66%.

Vision: To increase coverage of the city with an underground sewerage system and promote environmentally safe sanitation practices.

Strategies: Keeping the above-mentioned vision in consideration and based on the assessment of the existing and future demand, the detailed project requirements for augmentation of sewerage and sanitation system have been proposed. The CDP recommends that a City Sanitation Plan be prepared. A Sewerage treatment plant (STP) and sewage collection system is to be developed for improvement of the environment. The short term requirements include the construction of an STP and safe disposal of the waste water into the river. The long term assessment shows a huge gap and large scale improvement that will be required to ensure proper sewage collection and disposal. The CDP articulates achieving 100 percent sanitation and making the city open defecation free. For successful implementation of any change management process, effective communication strategy among key stakeholders is important hence CDP also emphasizes on effective communication and public awareness.

Projects	Unit	Phase I (2011-16)		Phase II (2016-21)		Phase III (2021-30)	
		Quantity	Cost (Rs. Crore)	Quantity	Cost (Rs. Crore)	Quantity	Cost (Rs. Crore)
Primary and Secondary Network	KM	18.8	2.63	40.6	11.62	36.9	23.93
Sewerage Treatment Plant	MLD	-	-	50.0	74.17	20.0	73.70
Toilet Blocks	Nos	41	2.12	17	1.88	24	6.65
Planning Studies			0.15		0.10		0.10
Sub Total			4.90		87.77		104.38
Grand Total		Rs. 197.05 crores					

C) Storm Water Drainage

Arrah town has a flat topography with a slope towards the Ganga River. The City has a drainage network of 20 kms, which is far from satisfactory. There are no separate systems to carry the sewage, sullage and storm water. There are nine major drains in the town which are mostly open and heavily silted. Water logging is a problem in the rainy season.

Vision: To establish an effective rain water collection system thereby reducing mixing of rain and sullage water and reducing the incidence of water logging during monsoons.

Strategies: Keeping the above-mentioned vision in mind and based on the assessment of the existing and future demand, the detailed project requirements for augmentation of storm water drainage system have been proposed. The CDP suggests for comprehensive survey of existing infrastructure, upgradation and renovation of existing drains, construction of new drains, enhanced coordination between other agencies implementing similar projects and effective communication strategy to create awareness among the people to avoid the practice of dumping garbage in the drains.

Projects	Unit	Phase I (2011-16)		Phase II (2016-21)		Phase III (2021-30)	
		Quantity	Cost (Rs. Crore)	Quantity	Cost (Rs. Crore)	Quantity	Cost (Rs. Crore)
Storm Water Collection Network	KM	10.0	1.45	1.1	0.37	3.4	3.34
De-silting of Nala		40.0	1.80	-	-	-	-
Planning Studies			0.07		0.10		0.10
Sub Total			3.32		0.47		3.44
Grand Total			Rs. 7.23 crores				

D) Solid Waste Management

Arrah town generates an average of 102 tonnes of solid waste daily at the rate of 400 grams per capita per day. Currently there is no door to door collection of primary waste. The predominant mode of primary collection is by way of street sweeping. In absence of the systems of storage of waste at source and on account of indiscriminate disposal of waste on the streets, drains, etc. the streets remain dirty all the time and drains get clogged necessitating multiple handling of waste. Transportation is not scientifically designed. AMC is not in a position to transport the entire quantity of waste generated in the city on a day to day basis on account of inadequacy of fleet of vehicles and inappropriate management for transportation of waste. The collection efficiency of solid waste is only 59% and there is no scientific disposal of solid waste.

Vision: To achieve environmentally sustainable waste management practices in the city.

Strategies: Keeping the above-mentioned vision in mind and based on the assessment of the existing and future demand, the detailed project requirements for solid waste management system have been proposed. The CDP suggests need for 100% door-to-door collection and source segregation, that can be outsourced to groups like resident welfare associations and rag pickers cooperatives. A scientific treatment and disposal facility according to the solid waste management rules is also recommended. Other strategies are on employment of conservancy staff, capacity building and training programmes to the staff and governance aspects to identify suitable and potential private partners.

Projects	Unit	Phase I (2011-16)		Phase II (2016-21)		Phase III (2021-30)	
		Quantity	Cost (Rs. Crore)	Quantity	Cost (Rs. Crore)	Quantity	Cost (Rs. Crore)
Treatment & Disposal Site	TPD	80.0	3.09	130.0	9.69	50.0	10.83
Container Bins required	No.	60	0.63	20	0.48	40	2.47
New Vehicles	No.	30	5.07	19	7.09	26	24.53
Awareness Campaigns	No.	9	0.09	10	0.10	10	0.10
Sub Total			8.88		17.36		37.93
Grand Total			Rs. 64.16 crores				

E) Roads, Traffic and Transportation

River Ganga in the North and Arrah Canal in the East of the town majorly regulates the form of road network in the Arrah municipal area. The railway line (Delhi-Howrah Railway line) that passes through the town in an east-west direction has also influenced the circulation pattern of the town. These have led to linear developments. Arrah town lacks organised parking spaces and the road width is further decreased with unorganised parking on the roadside. Lack of public transport system forces the citizens to depend on private vehicles that thus increase traffic.

Vision: To improve the condition of the roads, decongest the city core and provide adequate, safe and user friendly public transportation system in the city.

Strategies: Keeping the above-mentioned vision in mind and based on the assessment of the existing and future demand, the detailed project requirements for roads, traffic and transportation have been proposed. The CDP recommends upgrading the existing road network, creation of parking lots at all major points of vehicle congregation and junction improvement. Development of cheap and efficient public transport system, construction of railways over bridges, regulating the movement of cattle, proper street lighting and proper space kept on road side to incorporate tree plantation.

Projects	Unit	Phase I (2011-16)		Phase II (2016-21)		Phase III (2021-30)	
		Quantity	Cost (Rs. Crore)	Quantity	Cost (Rs. Crore)	Quantity	Cost (Rs. Crore)
Road Network	KM	25.0	17.92	6.2	15.56	25.6	142.01
Footpaths to be constructed	KM	22.3	2.68	2.8	0.92	11.4	8.42
Flyovers	Nos	1	3.54	-	-	-	-
Parking	Nos	5	0.13	-	-	-	-
Bus Stand Redevelopment			0.70		-		-
Truck Terminal			3.00		-		-
Junction Improvement	Nos	7	0.02	1	0	-	-
Rickshaw Stands	Nos	14	0.25	11	0.28	-	-
Tempo Stands	Nos	9	0.16	1	0.02	-	-
Planning Studies			0.40		-		-
Sub Total			28.80		16.78		150.43
Grand Total			Rs. 196.01 crores				

F) Street Lighting and Fire Fighting

City Development Plan for Arrah: EXECUTIVE SUMMARY

As per Census 2001, there are about 3,160 streetlight poles in Arrah. But it is to be noted that most of the streetlight poles have no lighting fixtures. In the absence of records, it is difficult to comment accurately on the number of functioning light fixtures however, as per discussion with officials concerned in AMC, it is being reported that most of the light fixtures are non functional. Recently, 100 Sodium Vapour Lamps and two number High Mast Lamps have been installed in the corporation area with MLA fund.

The fire fighting systems in Arrah are far below the standards with lack of manpower and also non maintenance of the existing equipments.

G) Housing and Urban Poverty

The recent survey undertaken under the ongoing SPUR project in 2008 has identified a total of 26 slum areas in AMC. The estimated population in these slum areas is around 22,736 which is approximately 9% projected population for the year 2010.

Service levels in the slum area are very poor. Most of the slum population depends on hand pumps in the absence of water supply connections. Of the total 185 public stand posts (PSPs) in the municipal area, only 5 PSPs are in slum areas. Of the total 922 hand-pumps provided by AMC and PHED in the whole city, only 45 are in the slum areas. Slum areas lack sanitation leading to high levels of open defecation. Solid waste management is also virtually absent. Due to the slum dwellers' lack of awareness about waste management and unavailability of municipal services, the practice of open dumping of waste in open drains is common. This is a contributory factor to choking of drains leading to flooding during the monsoons. The dilapidated condition of culverts worsens the situation in the rains.

Vision: Provision of universal access to all basic urban services on an affordable cost.

Strategies: Keeping the above-mentioned vision in mind and based on the assessment of the existing and future demand, the detailed project requirements for urban poverty alleviation. The CDP suggests comprehensive survey and developing a slum upgrading strategy in a phased manner. The CDP also suggests the need for a policy on land tenure, increasing access to institutional funds and establishment of support mechanisms for enterprise development. The document also highlights the need for strengthening community-based institutions and increasing community participation through involvement of NGO's, CBO's, SHG's, etc.

Projects	Unit	Phase I (2011-16)		Phase II (2016-21)		Phase III (2021-30)	
		Quantity	Cost (Rs. Crore)	Quantity	Cost (Rs. Crore)	Quantity	Cost (Rs. Crore)
Low Cost Housing	Nos	379	6.02	42	0.94	-	-
Planning Studies			0.10		-		-
Sub Total			6.12		0.94		-
Grand Total				Rs. 7.06 crores			

H) Social Infrastructure

City Development Plan for Arrah: EXECUTIVE SUMMARY

As the district headquarters of Bhojpur, Arrah caters to the education and health needs of the whole district. The AMC does not run any school or education institution. The Education Department of the State Government runs schools and other similar institutions with control over administrative and financial aspects. The town has around ten colleges (for Science, Commerce & Arts disciplines) of which five are government run. The town has one government hospital - Sadar Hospital - with a total bed-capacity of 150. This hospital caters to the requirement of the entire district.

The town has three cinema halls, one stadium, one auditorium and 2 public libraries. The town has no designated public park or open space in the core area of the town.

Strategies: The CDP suggests the need to bring in quality for education, provision of more marketing facilities, dharamshalas and creation of cultural and recreational facilities like community centers, sports complex, etc. Undertaking public health awareness drives are also recommended.

Projects	Unit	Phase I (2011-16)		Phase II (2016-21)		Phase III (2021-30)	
		Quantity	Cost (Rs. Crore)	Quantity	Cost (Rs. Crore)	Quantity	Cost (Rs. Crore)
Street Lights	Nos	170	0.17	9	0.03	39	0.26
Fire Stations	Nos	-	-	1	0.67	-	-
Fire Engines	Nos	1	0.12	2	0.58	1	0.67
Improvement of tourism spots	Nos	-	-	5	0.50	2	0.20
Improvement of tourism infrastructure	Nos	-	-	9	0.45	1	0.05
Parks	Nos	2	0.30	3	0.79	-	-
Preservation of water bodies	Nos	-	-	5	1.04	-	-
Education	Nos	-	0.10	-	0.25	-	0.25
Health	Nos	-	0.15	-	0.25	-	0.25
Institutional Development	Nos	-	0.75	-	1.10	-	1.00
Grievance redressal cell	Nos	-	0.10	-	-	-	-
Community Room			0.40		0.46		0.45
Hawkers market			0.40		0.60		0.60
Recreational Club			0.10		0.20		-
Night Shelters			0.30		0.36		0.45
Planning Studies		-	-	-	-	-	-
Sub Total			2.89		7.28		4.18
Grand Total			Rs. 14.35 crores				

I) Environment

Arrah is experiencing environmental challenges due to lack of infrastructure and services. The town is developing in an uncontrolled manner that is adversely impacting the environment. There are no specific initiatives to check various environmental aspects. It should be noted that there is no district level office of the state Pollution Control Board in Bhojpur District. There are 72 water bodies (ponds/tanks) and very few small gardens at various locations in the AMC area. Some of the ponds are encroached by slum dwellers like John Dean Pond and the pond near Jawahar Tola.

Strategies: A strategy is adopted, which covers policy-level planning, reforms and institutional strengthening. The CDP recommends for preservation and protection of water bodies and developing them as recreational areas. Making rainwater-harvesting mandatory for building permission is also suggested in the CDP. Other suggestions include setting up of sewage treatment plant, treatment of sewerage, industrial waste, electronic waste, scientific management of bio-medical waste and ban in use of plastics bags. For successful implementation of the projects, active people's participation is important hence, the CDP also emphasizes on effective public awareness.

J) Urban Heritage and Tourism

The city has a few places of significance namely the Arrah House, Jain Museum, Jagdishpur Fort, Aranyadevi Temple, Chandwa and Jain Temples.

Strategies: Keeping the above-mentioned vision in mind and based on the assessment of the existing and future demand, the detailed project requirements for maintenance and development of these sites.

Financial Position of the Local Body

The finances of AMC are shown in the table below.

S No.	Items	2007-08	2008-09	2009-10	CAGR
I	Revenue Account				
1	Income	224.34	329.53	260.79	107.81
2	Expenditure	319.21	433.86	346.32	159.86
3	Surplus/Deficit	-94.87	-104.34	-85.53	-52.05
II	Capital Account				
1	Income	2.93	1325.91	283.80	0.00
2	Expenditure	3.04	15.29	5.70	2.04
3	Surplus/Deficit	-0.11	1310.62	278.10	-2.04

S No.	Items	2007-08	2008-09	2009-10	CAGR
III	Overall				
1	Income	227.27	1655.43	544.60	107.81
2	Expenditure	322.24	449.15	352.02	161.90
3	Surplus/Deficit	-94.98	1206.28	192.58	-54.09

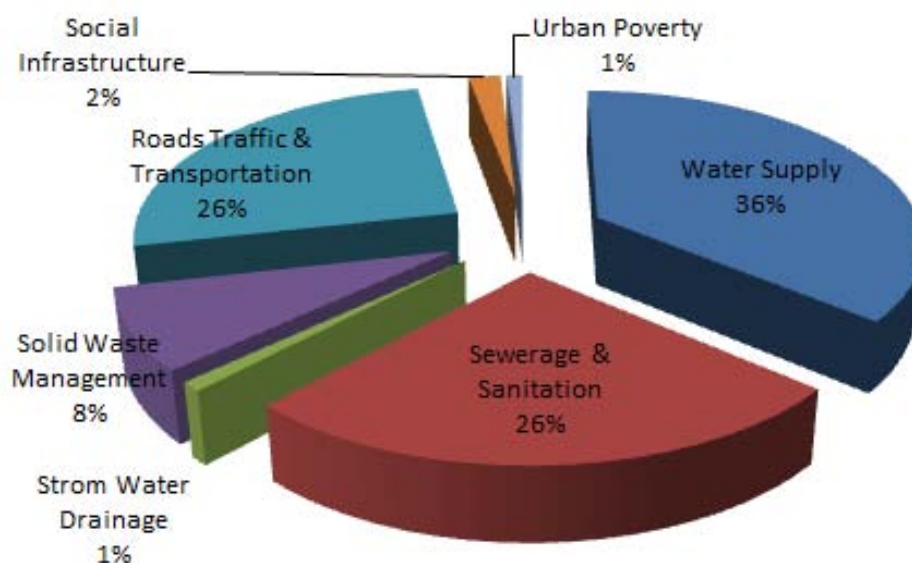
All figures in Rs. Lakh

Strategies: The CDP recommends transition from single entry cash based accounting system to double entry accrual based accounting system at the earliest and computerization of all municipal operations. Preparation of a financial management manual for the municipality and financial management tools like cash management, inventory management, receivable management, and expenditure management for smooth operation are also recommended in the CDP. Other suggestions include assessment of staff training needs and capacity building.

Capital Investment Plan (CIP)

The total funding over the life of the CDP period, i.e. up to year 2030, is estimated at **Rs. 761.17 crore**. Sector-wise details of the investments are worked out for the entire period; the following section represents the investments over the three phases i.e. Short Term, Mid Term and End Term, as illustrated in the table below. The scheduling or phasing of the CIP is based on the analysis of fiscal resources for new investments and O&M, technical capacity for construction and the choice of specific improvements to be taken up over a period of 5 years (2011-2012 to 2015-16). About 30.5% of the capital investment estimate is envisaged for water supply. Solid waste management and road, traffic and transportation are the other major sectors with an envisaged utilisation of 11.2% and 36.5%, respectively.

Capital Investment for Arrah (All Investments in INR Crores)	Phase I (2011-16)	Phase II (2016-21)	Phase III (2021-30)	TOTAL
	Investment	Investment	Investment	
Water Supply	24.08	85.57	165.65	275.30
Sewerage & Sanitation	4.90	87.77	104.38	197.05
Storm Water Drainage	3.32	0.47	3.44	7.23
Solid Waste Management	8.88	17.36	37.93	64.16
Roads Traffic & Transportation	28.80	16.78	150.43	196.01
Social Infrastructure	2.89	7.28	4.18	14.35
Urban Poverty	6.12	0.94	-	7.06
Grand Total	78.99	216.17	466.01	761.17



Financial Operating Plan (FOP)

The investment capacity of Arrah Municipal Corporation is assessed through a Financial Operating Plan (FOP) which gives a multi-year forecast of finances of the local body for the short-term. In line with the phasing of identified investment from FY 2011-12 to FY2015-16, the FOP has been generated for the same period. A salient feature of the FOP is that all outstanding dues, including debt and non-debt liabilities, have been taken into account.

An important aspect that needs to be considered in raising financial resources is beneficiary contribution. This practice has to be promoted and PPP also needs to be introduced to make the services sustainable. Thus a total investment of Rs. 795 lakh can be pooled through PPP – this further decreases the financial burden on the Municipal Corporation in the next five years.

Head	2011-12	2012-13	2013-14	2014-15	2015-16
Scenario 1: Base Case Scenario					
Grants	212	225	239	253	268
Loans/Borrowings	1,725	2,475	2,100	1,675	2,100
Scenario 2: Moderate Scenario					
13th Finance Commission	-	14	16	17	19
State Government	330	476	492	224	333
Central Government	579	629	175	144	302
RAY	253	95	97	103	88
CBULB	15	15	15	15	15
Viability Gap Funding (VGF)	1	93	3	1	2
Others	23	18	5	5	5

City Development Plan for Arrah: EXECUTIVE SUMMARY

Head	2011-12	2012-13	2013-14	2014-15	2015-16
Grants	1,202	1,340	802	510	763
Loans/Borrowings	725	1,200	1,200	975	1,025
Scenario 3: Best Case Scenario					
13th Finance Commission	-	14	16	17	19
State Government	330	476	492	224	333
Central Government	579	629	175	144	302
RAY	253	95	97	103	88
CBULB	15	15	15	15	15
Viability Gap Funding (VGF)	1	93	3	1	2
Others	23	18	5	5	5
Grants	1,202	1,340	802	510	763
Beneficiary Contribution	36	46	45	49	57
Other sources/PPP	31	117	459	173	25
Loans/Borrowings	-	-	-	-	-

Source: All figures in Rs. lakh

Overall Assessment

An overall assessment of the existing service delivery levels across various indicators was done. The analysis shows that most of the service levels in Arrah are 'Average' and 'Below Average' and therefore a need to improve the overall service levels in the town.

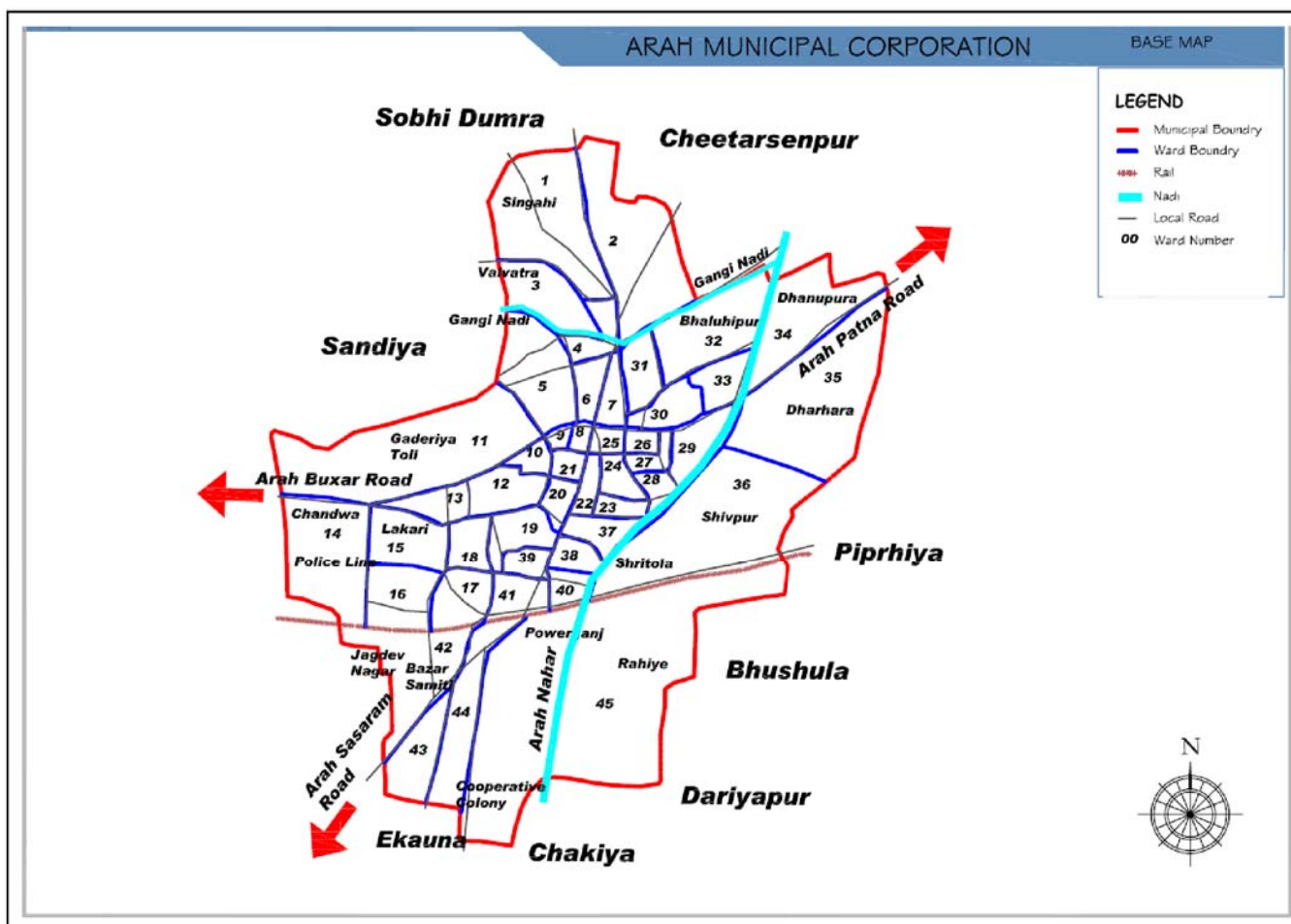
S no	Indicator	Coding
1	Status of Infrastructure and Service Delivery Levels	
	a. Coverage of Water Supply	
	b. Per Capita Availability of Water	
	c. Continuity of Water Supply	
	d. Coverage of Individual Toilets	
	e. Door to Door Collection	
	f. Collection Efficiency of Solid Waste	
2	Financial Management	
	a. Operating Ratio	
	b. Growth in Revenue Income	
3	Poverty Level	
	Population Below Poverty Line (BPL)	
4	Organization Structure	
	Staffing pattern, availability of sufficient staff, competency level of existing staff for implementing proposed projects	
5	Leadership	

S no	Indicator	Coding
	Leadership quality, awareness and understanding regarding urban sector, proactive approach for implementing reform measures	
6	Economic Development Potential	
	Potential for Development, linkages to the state capital and other cities, status of existing infrastructure	
7	Environment Sustainability	
	Status of Environment, quality of water, air,	
8	Participation	
	Level of Participation from Citizen/Citizen Forums/Welfare Association in municipal affairs	
9	Compliance with Reforms	
	Status of reform implementation and preparedness for implementation	

Legend

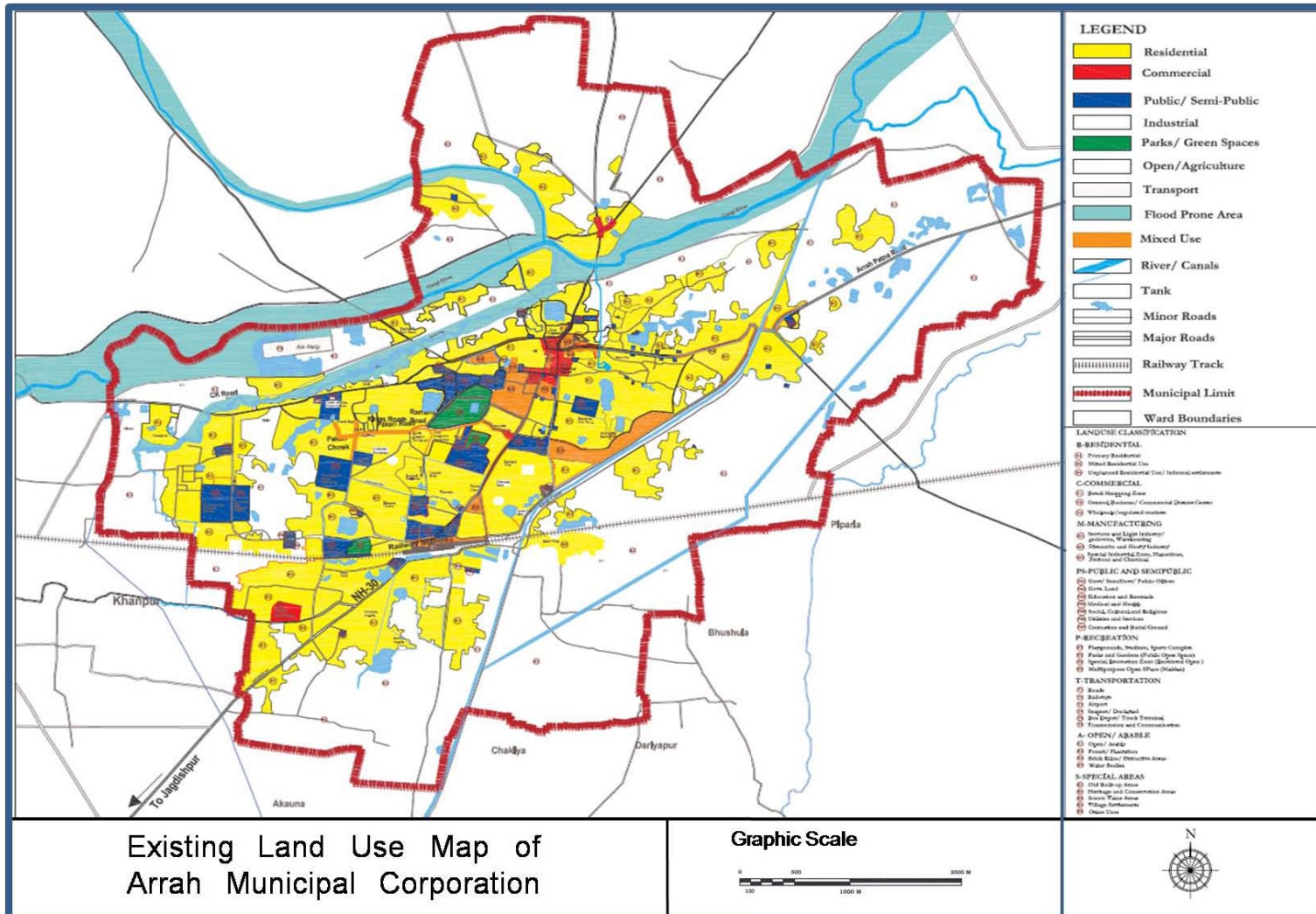
Alarming  Average  Below Average  Good 

Base Map: Arrah Municipal Corporation



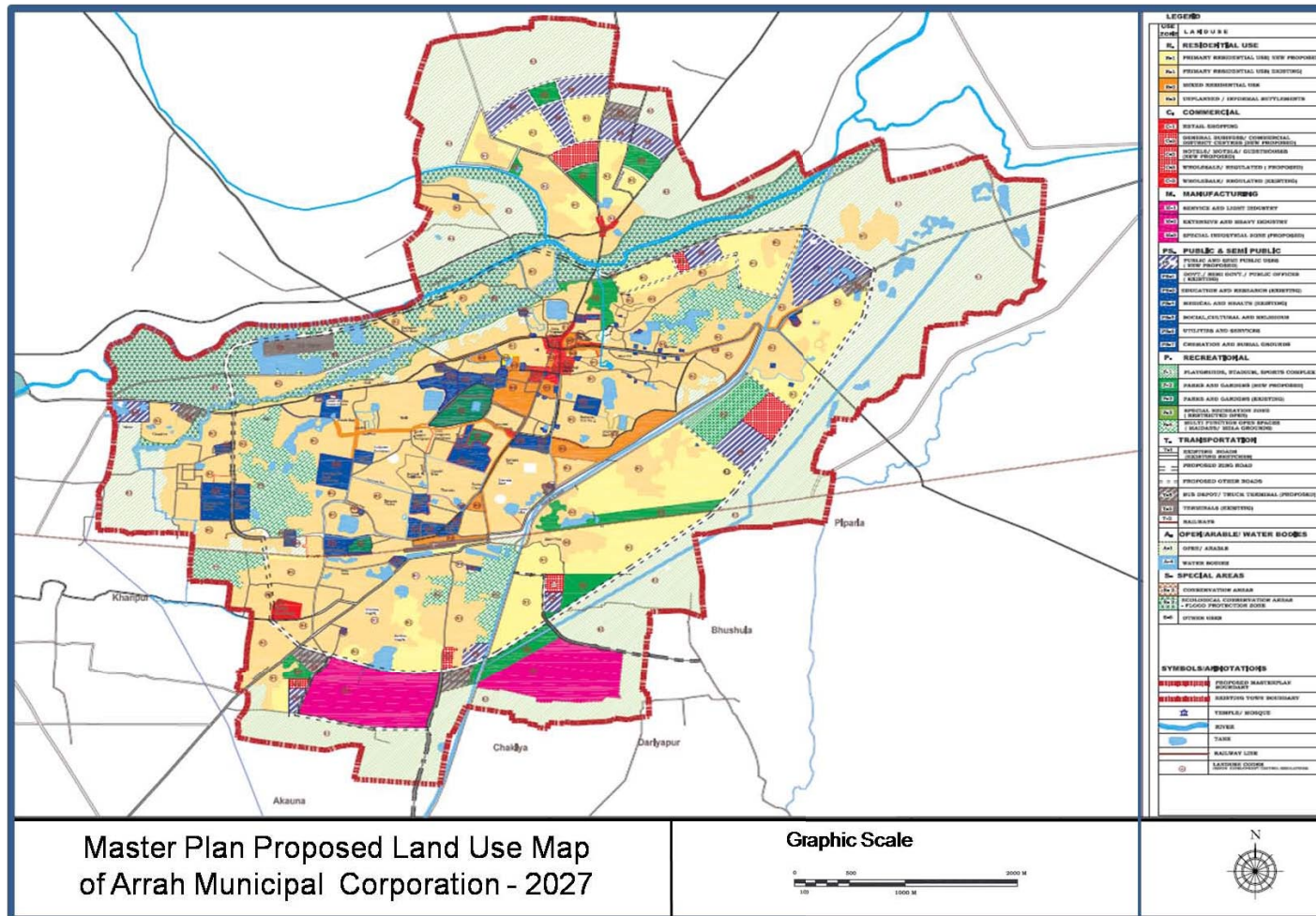
Source: Support Programme for Urban Reforms in Bihar

Existing Land Use: Arrah Municipal Corporation



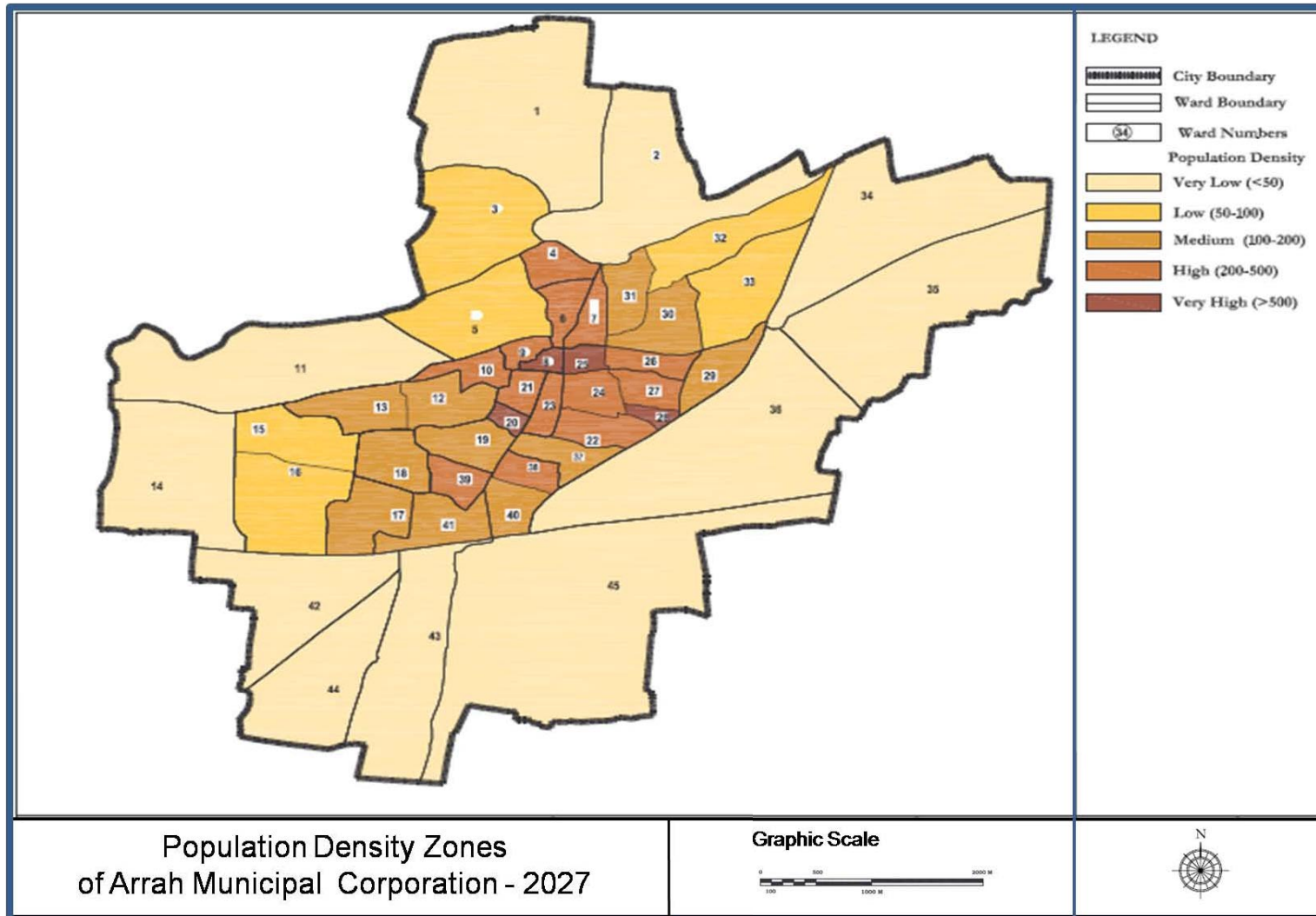
Source: Arrah Master Plan - 2027

Proposed Land Use: Arrah Municipal Corporation



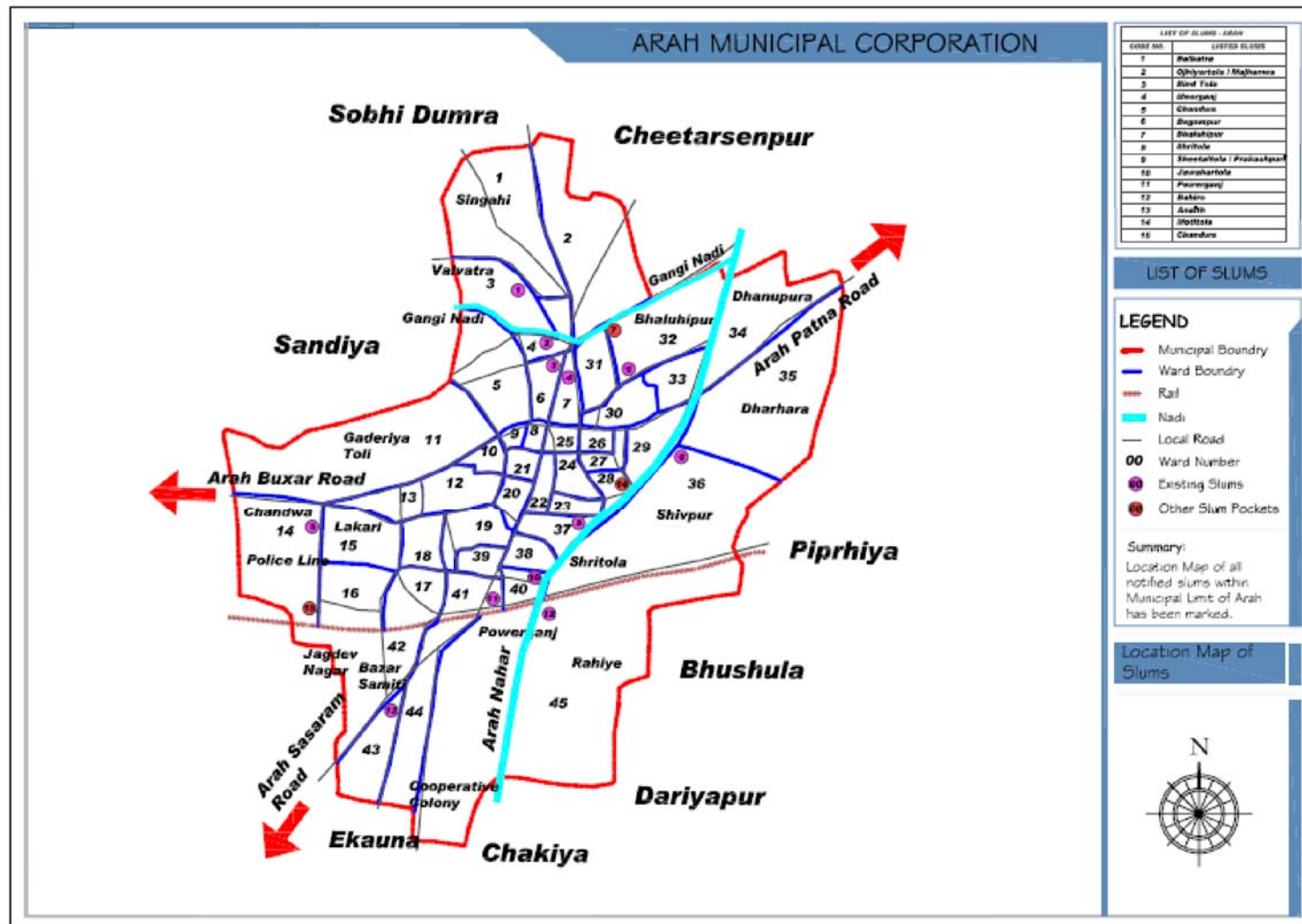
Source: Arrah Master Plan - 2027

Ward Wise Density as Proposed in Master Plan 2027: Arrah Municipal Corporation



Source: Arrah Master Plan - 2027

Notified Slums: Arrah Municipal Corporation



Source: SPUR Survey; December 2010