



Urban Development and Housing Department
Government of Bihar

City Development Plan (2010-30)

SIWAN



EXECUTIVE SUMMARY

CDP Prepared By:

 **ERNST & YOUNG**

and



Support Programme for Urban Reforms in Bihar

(A Government of Bihar Initiative)

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प्रेम कुमार
मंत्री
नगर विकास एवं आवास विभाग
बिहार, पटना



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 सिवान 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 सिवान नगर परिषद् 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 परिषद् 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 सिवान 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। सिवान नगर परिषद् इस सहयोग के लिए DFID का आभारी है।


(सभापति)
सिवान नगर परिषद्


(सभापति)
सिवान नगर परिषद्

Overview

Siwan is the district headquarters of Siwan district; it is the 18th most populated town in Bihar and the only Class-I urban centre in Siwan District. The Siwan Municipal Council was established in 1924.



The town has a population of 109,919 as per the Census 2001 and the municipal area is about 13.05 sq km. Siwan is well connected with other parts of the state and is 146 Km from Patna. Although, there were no state highways, some major road construction activities have been taken up. Siwan is an important railway junction of the North Eastern Railway with several express trains halting at the station.

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The competitive advantage of Siwan is in its good road connectivity with the surrounding areas. It is 140 km from Patna and also borders Uttar Pradesh and is a district headquarter town. The economy of Siwan district is mainly dependent on agriculture and Siwan town is the main market for the district. The town had a good industrial base due to the presence of three sugar mills and one jaggery mill. Siwan used to be a hub of power looms to support the textile industry of the state.

Siwan has been identified by the Government of Bihar as a part of seven handloom clusters (districts) in Bihar considering its importance in the state handloom sector as also future potential for their growth.

Siwan 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. The large unemployed workforce can be trained in various activities to support the industrial activities in the region and overall development of the city.

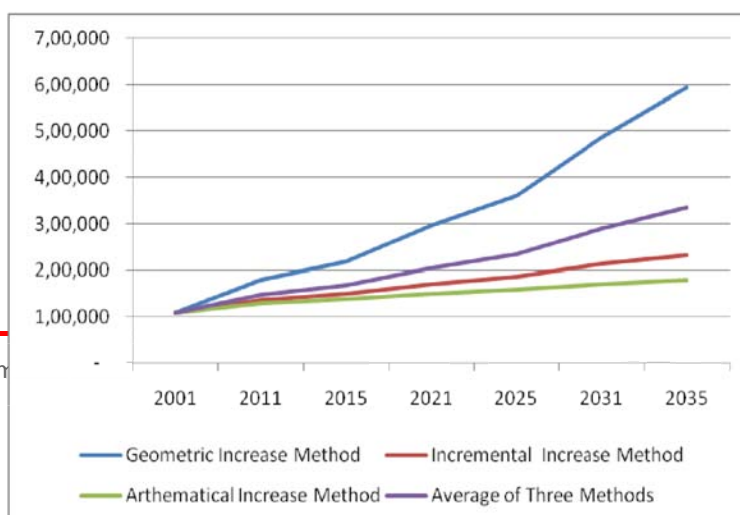


CITY VISION

Based on an assessment of the city, stakeholder consultations and focused group discussions, the vision for the town was derived. The consensus that emerged at the end of the participatory process was as follows: **“Siwan should be clean, green and citizen friendly”**. Based on the identified Vision, sector-specific approach has been adopted in framing the action plan. The focus sectors are water supply; sewerage & sanitation; storm water drainage; solid waste management; roads, traffic & transportation; urban poverty & housing; and urban environment & social amenities.

Demography

The population of Siwan town was 109,919 as per the Census 2001. During 1971-81 and 1981-91, the population grew at a high rate of 54.65 and 62.09% respectively, whereas in



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the 1991-2001, the population growth has been only 32.23%. The population density of the town is about 8,423 persons per sq km.

The population growth in Siwan does not point to any specific trend – the decadal growth rates during 1961 to 1991 increased from 21.16% to 62.09%, while the rates declined in the last decade. The high growth rates during the 1970s to 1980s were mainly due to the formation of separate district, migration and establishment of industries in the vicinity of the city.

Based on population figures from Census 1961 to 2001, population has been projected by using three different methods namely Geometric Increase Method, Incremental Increase Method and Arithmetic Increase Method. Projection through Geometric Method was on a higher side whereas projections through Incremental Increase Method and Arithmetic Increase Method were low. Therefore, average of all three projections has been considered as current population and this virtually matches the preliminary data under Census 2011. Therefore, for the planning horizon the same process has being used to project the population. It is estimated that the population of Siwan would go up to 335,455 by year 2035.

Sector Assessments & Growth Strategies

A) Water Supply

The Public Health and Engineering Department (PHED) is responsible for providing water supply to the city - planning, designing and executing capital works. The water supply is completely dependent on ground water. Ground water is extracted through high yielding tube-wells. The system is decentralised based on overhead tanks (OHTs). The present supply of water is around 2.4 MLD. The existing storage capacity of 3.6 ML seems adequate to support the present demand in the town. Water is directly pumped to the OHTs and then into the distribution network. Chlorination is being done at some OHTs. There are only 5,238 household level connections; this translates into coverage of 27.5% only. Most of the population depends on other sources of water such as hand pumps, tube wells, wells, etc. The town has about 100 Public Stand Posts (PSPs) and 125 hand pumps, of which some are in slum areas. There is no testing of water quality. There are significant demand-supply gaps and the short term requirements essentially include moderate augmentation of treatment components and distribution service levels to ensure equitable supply of water. The per capita water supply at present is far below the required standard of 135 lpcd. There are no separate charges levied for water with a water tax being collected as part of the Holding Tax.

Vision: To assure adequate and equitable daily water supply for a reasonable length of time.

Strategies: Keeping the above-mentioned vision and based on the assessment of the existing and future demand, the CDP recommends specific interventions for system refurbishment and augmentation. Recommendations include a detailed consumer level survey; source augmentation to meet the future requirements of 52 (MLD); reducing Non-Revenue Water (NRW) to 20 percent; setting up chlorination units; construction of new storage reservoirs for enhancing storage capacity of the system; expanding and strengthening distribution network and replacing old pipelines; protection of water bodies; rain water harvesting including regulatory measures for ground water use and ensuring institutional accountability.

Projects	Unit	Phase I (2011-16)		Phase II (2016-21)		Phase III (2021-30)	
		Quantity	Cost (Rs. Crores)	Quantity	Cost (Rs. Crores)	Quantity	Cost (Rs. Crores)
Rising mains	KM	1.7	0.92	2.7	2.82	3.3	9.34
Distribution Network	KM	9.6	2.38	15.3	7.33	17.9	24.24
Chlorination Unit	MLD	10.0	2.40	30.0	12.84	10.0	13.45
Strengthening of Existing Network	Km	43.1	2.71	-	-	-	-
Metering and Control Mechanism	No.	8,296	0.99	15,796	2.69	27,436	7.68
Storage Capacity Augmentation	ML	8.0	13.76	5.0	21.38	-	-
Source Augmentation			2.76		-		-
Planning Studies			0.77		0.10		0.10
Sub Total			26.69		47.16		54.81
Grand Total				Rs. 128.66 crores			

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B) Sewerage and Sanitation

Siwan does not have an organised sewerage system. In the absence of a proper wastewater disposal system, all discharge is into open drains ultimately into the Daha River. The current network coverage is inadequate and poses a potential threat to overall health and hygiene. The short and medium term recommendations in the CDP include setting up of Sewerage Treatment Plant (STP) and associated networks for improvement of the environment. The long term assessment reveals a significant gap and the large scale improvements will be required to ensure proper sewage collection and disposal system in Siwan. Infiltration of rainwater into the sewerage lines in most of the areas and absence of segregated sewerage and storm water drains cause problems, especially during the monsoons.

Vision: To provide citywide coverage of sewerage and sanitation system to improve town level environment.

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 the development of a City Sanitation Plan and proposes the design and construction of a comprehensive sewerage system including an STP and networks - primary and secondary or primary, secondary and tertiary along the sewerage line at reasonable distances. The CDP also recommends the use of recycled water wherever possible for appropriate use. The CDP includes recommendations for achieving 100 percent sanitation and making the city open defecation free. The CDP also recommends extensive public awareness campaigns to complement infrastructure provision.

Projects	Unit	Phase I (2011-16)		Phase II (2016-21)		Phase III (2021-30)	
		Quantity	Cost (Rs. Crores)	Quantity	Cost (Rs. Crores)	Quantity	Cost (Rs. Crores)
Primary and Secondary Network	KM	8.1	1.15	22.4	6.49	23.5	15.12
Sewerage Treatment Plant	MLD	-	-	25.0	32.65	25.0	73.36
Toilet Blocks	Nos	25	1.30	12	1.31	19	5.24
Planning Studies			0.14		0.08		0.08
Sub Total			2.59		40.53		93.80
Grand Total			Rs. 136.92 crores				

C) Storm Water Drainage

The ULB does not have readily available records on the length of the drains. Discussions in the course of the preparation of the CDP revealed that drain coverage is very low and most areas of the town are water logged in the rainy season.

Vision: To establish an effective drainage system that prevents intermixing of storm water and sullage and water logging in the rainy season.

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Strategies: Keeping the above-mentioned vision in mind and based on the assessment of the existing and future demand, the CDP recommends a comprehensive survey of existing drainage infrastructure in the short term to plan for up-gradation and renovation of existing drains as well as construction of new drains.

Projects	Unit	Phase I (2011-16)		Phase II (2016-21)		Phase III (2021-30)	
		Quantity	Cost (Rs. Crores)	Quantity	Cost (Rs. Crores)	Quantity	Cost (Rs. Crores)
Storm Water Collection Network	KM	6.2	0.91	1.5	0.55	2.8	2.43
De-silting of Nala	KM	20.0	0.90	-	-	-	-
Planning Studies			0.06		0.08		0.08
Sub Total			1.87		0.63		2.51
Grand Total			Rs. 5.01 crores				

D) Solid Waste Management

Siwan town generates about 44 tonnes of garbage per day at the rate of 300 grams per capita per day (gpcd). At present there is no door-to-door collection and there is indiscriminate dumping of wastes in drains and all available open areas. The predominant mode of primary collection is street sweeping – that is not very effective as is seen from the state of the roads in the town. The ULB is not in a position to transport the entire quantum of waste generated in the town because of shortage of vehicles. The collection efficiency of solid waste is only 47%. There is no scientific disposal of wastes and dumping in the fringes of the town is common practice.

Vision: To establish and maintain an effective and sustainable waste management system in the city.

Strategies: Keeping the above-mentioned vision in mind and based on the assessment of the existing and future demand, the CDP suggests the need for introduction of 100% door to door collection and source segregation that could be outsourced to groups like resident welfare associations, rag pickers cooperatives, etc. 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 partner.

Projects	Unit	Phase I (2011-16)		Phase II (2016-21)		Phase III (2021-30)	
		Quantity	Cost (Rs. Crores)	Quantity	Cost (Rs. Crores)	Quantity	Cost (Rs. Crores)
Treatment & Disposal Site	TPD	50.0	1.93	50.0	2.78	40.0	7.92
Container Bins required	No.	25	0.25	20	0.48	20	1.35
New Vehicles	No.	8	1.46	10	3.66	10	9.07
Awareness Campaigns	No.	5	0.05	8	0.08	8	0.08
Sub Total			3.69		7.00		18.42
Grand Total			Rs. 29.11 crores				

E) Roads, Traffic, and Transportation

The existing road network in the town is around 50 km with per capita road length of 0.35 km per 1,000 population. Around 80% of the road length is fully paved. The average traffic volume in the town is high especially on account of the Siwan – Chapra road that passes through the town. The road network in Siwan is insufficient, and the condition of the roads poor. The lack of adequate parking space promotes on-street parking affecting travel speed by causing conflict between slow and fast traffic. The lack of public transport forces the citizens to depend on private vehicles and thus increasing the traffic on the roads.

Vision: To improve the condition of the roads and provide adequate, safe and user friendly public transport in the city.

Strategies: Keeping the above-mentioned vision in mind and based on the assessment of the existing and future demand, the CDP recommends upgrading the existing road network, creation of parking spaces at all major points of vehicle congregation and junction improvement and traffic regulation plan.

Projects	Unit	Phase I (2011-16)		Phase II (2016-21)		Phase III (2021-30)	
		Quantity	Cost (Rs. Crores)	Quantity	Cost (Rs. Crores)	Quantity	Cost (Rs. Crores)
Road Network	KM	13.5	10.79	12.3	25.72	20.0	103.19
Footpaths to be constructed	KM	11.6	1.45	5.5	1.52	8.9	6.11
Flyovers	Nos	-	-	1	5.58	-	-
Parking	Nos	4	0.11	-	-	-	-
Bus Stand Redevelopment			0.70		-		-
Junction Improvement	nos	6	0.02	-	-	-	-
Rickshaw Stands	nos	12	0.21	8	0.21	-	-
Tempo Stands	nos	5	0.08	-	-	-	-
Planning Studies			0.25		-		-
Sub Total			13.61		33.03		109.30
Grand Total			Rs. 155.94 crores				

F) Housing and Urban Poverty

The survey, recently undertaken under the ongoing SPUR programme in 2008 has identified 24 slums in the SMC area. The estimated population in these slums are around 14,445, which is around 10% of the projected population for the year 2010.

The service level in the slum area is very poor. In the absence of sanitation facilities, about 92% of slum dwellers practice open defecation. Most slums do not have any drains or systematic solid waste management.

Vision: Provision of universal access to basic services at an affordable cost.

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Strategies: Keeping the above-mentioned vision in mind and based on the assessment of the existing and future demand, the CDP recommends comprehensive slum upgrading in a phased manner including suggestions on land tenure policy, increasing access to institutional funds and establishment of support mechanisms for enterprise development. The CDP also recommends strengthening community based organizations like NGOs, CBOs, and SHGs etc for effective participation in the design and implementation of interventions.

Projects	Unit	Phase I (2011-16)		Phase II (2016-21)		Phase III (2021-30)	
		Quantity	Cost (Rs. Crores)	Quantity	Cost (Rs. Crores)	Quantity	Cost (Rs. Crores)
Low Cost Housing	Nos	288	4.57	32	0.72	-	-
Planning Studies			0.10		-		-
Sub Total			4.67		0.72		-
Grand Total					Rs. 5.39 crores		

G) Social Infrastructure

Siwan is an important center in the district in terms of educational facilities with a range of primary, secondary, higher secondary schools and colleges being located in the city. The town has several health facilities including a government hospital. The town has three cinema halls, one stadium and 2 public libraries.

Strategies: The CDP suggests the need to improve social infrastructure especially educational, health centres and establishment of cultural and community facilities. There are recommendations on public awareness campaigns for operation and maintenance of facilities created.

Projects	Unit	Phase I (2011-16)		Phase II (2016-21)		Phase III (2021-30)	
		Quantity	Cost (Rs. Crores)	Quantity	Cost (Rs. Crores)	Quantity	Cost (Rs. Crores)
Street Lights	Nos	74	0.07	19	0.05	30	0.19
Fire Stations	Nos	-	-	-	-	1	2.60
Fire Engines	Nos	1	0.16	1	0.39	1	0.74
Tourism spot improvement	Nos	2	0.20	3	0.30	2	0.20
Improvement of tourism infrastructure	Nos	1	0.05	9	0.45	-	-
Parks	Nos	1	0.14	2	0.50	-	-
Restoration of Daha River			0.25		-		-
Preservation of water bodies	Nos	2	0.66	-	-	-	-
Education	Nos		0.10		0.15		0.15
Health	Nos		0.10		0.15		0.20
Institutional Development	Nos		0.50		0.80		0.75
Grievance redressal cell	Nos		0.10		-		-
Community Room			0.30		0.24		0.30
Hawkers market			0.40		0.60		0.60
Recreational Club			-		0.20		-
Night Shelters			0.30		0.36		0.45
Planning Studies		-	0.25		0.20		0.20
Sub Total			3.58		4.39		6.38
Grand Total					Rs. 14.35 crores		

H) Environment Sustainability

The town environment is largely neglected. Existing water bodies and open spaces are used for indiscriminate dumping of wastes. The overall poor access to infrastructure further impacts the town environment. There are no specific identifiable interventions in this context. Neither Siwan district nor the town has a unit of the State Pollution Control Board.

Strategies: The strategy for environmental management needs to derive from a state level strategy that includes policy-level planning, reforms and institutional strengthening. The CDP includes recommendations for recommends for preservation and protection of water bodies; making rainwater harvesting mandatory for building permissions; setting up of STP, treatment for sewerage, industrial waste, electronic waste, scientific management of bio-medical waste and ban in use of plastics bags. The CDP also recommends public awareness campaigns for sustainability of environmental interventions.

Financial Position of the Local Body

The revenue account of Siwan Municipal Council has shown a surplus throughout the assessment period.

S No.	Items	2005-06	2006-07	2007-08	2008-09	2009-10	CAGR
I	Revenue Account						
1	Income	105	137	170	192	492	47%
2	Expenditure	91	133	157	188	200	21.7%
3	Surplus/Deficit	14	5	13	4	292	
II	Capital Account						
1	Income	474	406	200	492	251	-14.7%
2	Expenditure	62	492	85	569	84	7.7%
3	Surplus/Deficit	412	(86)	116	(77)	167	

(All figures in Rs. Lakh)

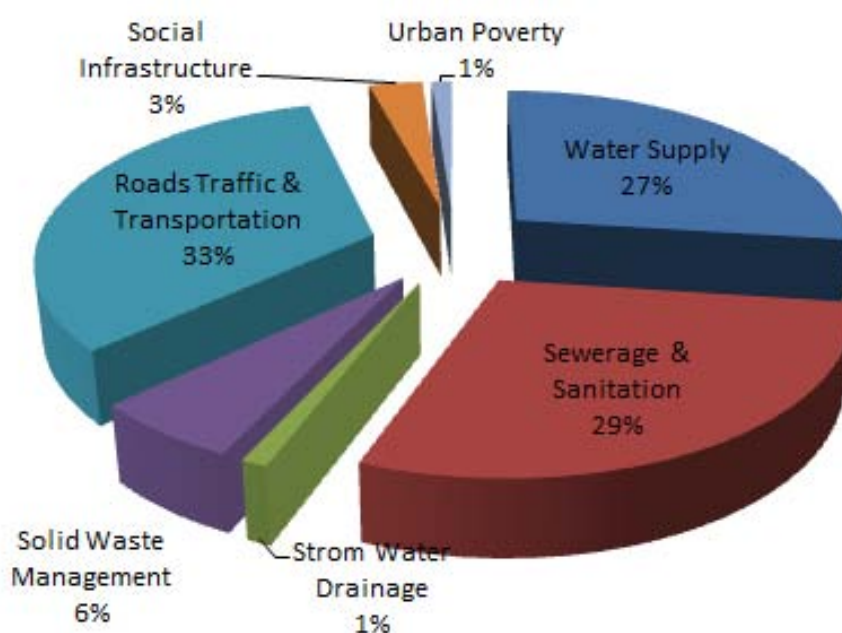
SMC has performed well as far as revenue account is concerned. It may be noted that operating ratio has been below unity (on an average) in the last five years. Revenue through Holding Tax contributes a mere 4.1% (average of five years) of the total revenue income of the ULB; this is a major concern for the SMC. Both revenue account and capital account has been accruing a substantial amount of surplus except in few years showing a fluctuating trend.

Strategies: The CDP recommends transition from single entry cash based accounting system to double entry accrual based accounting system; 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, expenditure management. Other suggestions include training need assessment to identify gaps and capacity building for the municipal staff.

Capital Investment Plan (CIP)

The total funding over the life of the CDP period, i.e. up to year 2030, is estimated at **Rs. 475.36 crores**. Sector-wise details of the investments are worked out for the entire period in a phase-wise manner, as represented 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 47.1% 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 6.5% and 24.0%, respectively. The remaining sectors account for about 22.4% of the total capital requirement.

Capital Investment for Siwan (All Investments in INR Crores)	Phase I (2011-16)	Phase II (2016-21)	Phase III (2021-30)	TOTAL
	Investment	Investment	Investment	
Water Supply Sub Total	26.69	47.15	54.81	128.66
Sewerage & Sanitation Sub Total	2.59	40.53	93.80	136.92
Storm Water Drainage Sub Total	1.86	0.62	2.50	4.99
Solid Waste Management Sub Total	3.68	7.00	18.42	29.11
Roads Traffic & Transportation Sub Total	13.61	33.02	109.30	155.94
Social Infrastructure Sub Total	3.58	4.39	6.38	14.35
Urban Poverty Sub Total	4.69	0.72	-	5.39
Grand Total	56.70	133.43	285.21	475.36



Financial Operating Plan

The investment capacity of SMC is assessed through a Financial Operating Plan (FOP) which gives a multi-year forecast of finances of the local body for the short term period. The FOP is generated to assess the investment-sustaining capacity of the Municipal Council, if it adopts a project funding structure comprising grants under the Central Government and the State Government and internal resources and loans accounting for the rest. The level of investment that Municipal Council can sustain is then determined by studying the overall surpluses/year-to-year opening balance and debt service coverage ratio (DSCR).

An important aspect that needs to be considered in raising financial resources is beneficiary contribution. This practice has to be promoted and the concept of PPP also needs to be introduced to make the services sustainable. Thus a total investment of Rs. 57.81 crores in short-term (2011-12 – 2015-16) can be pooled by implementing PPP, which further decreases the financial burden of the Municipal Council in the next five years.

Source	Scenario 1	Scenario 2	Scenario 3
Grants	1,588	3,559	3,559
13th Finance Commission	1,588	186	186
State Government		1,453	1,453
Central Government		1,241	1,241
RAY		471	471
CBULB		50	50
Viability Gap Funding (VGF)		63	63
Others		96	96
Private / PPP	-	-	265
Total	1,588	3,559	3,824
Beneficiary Contribution	-	-	166
Open Market/Fis/Other Sources	5,125	2,500	800

All figures are in lakh rupees

Overall Assessment

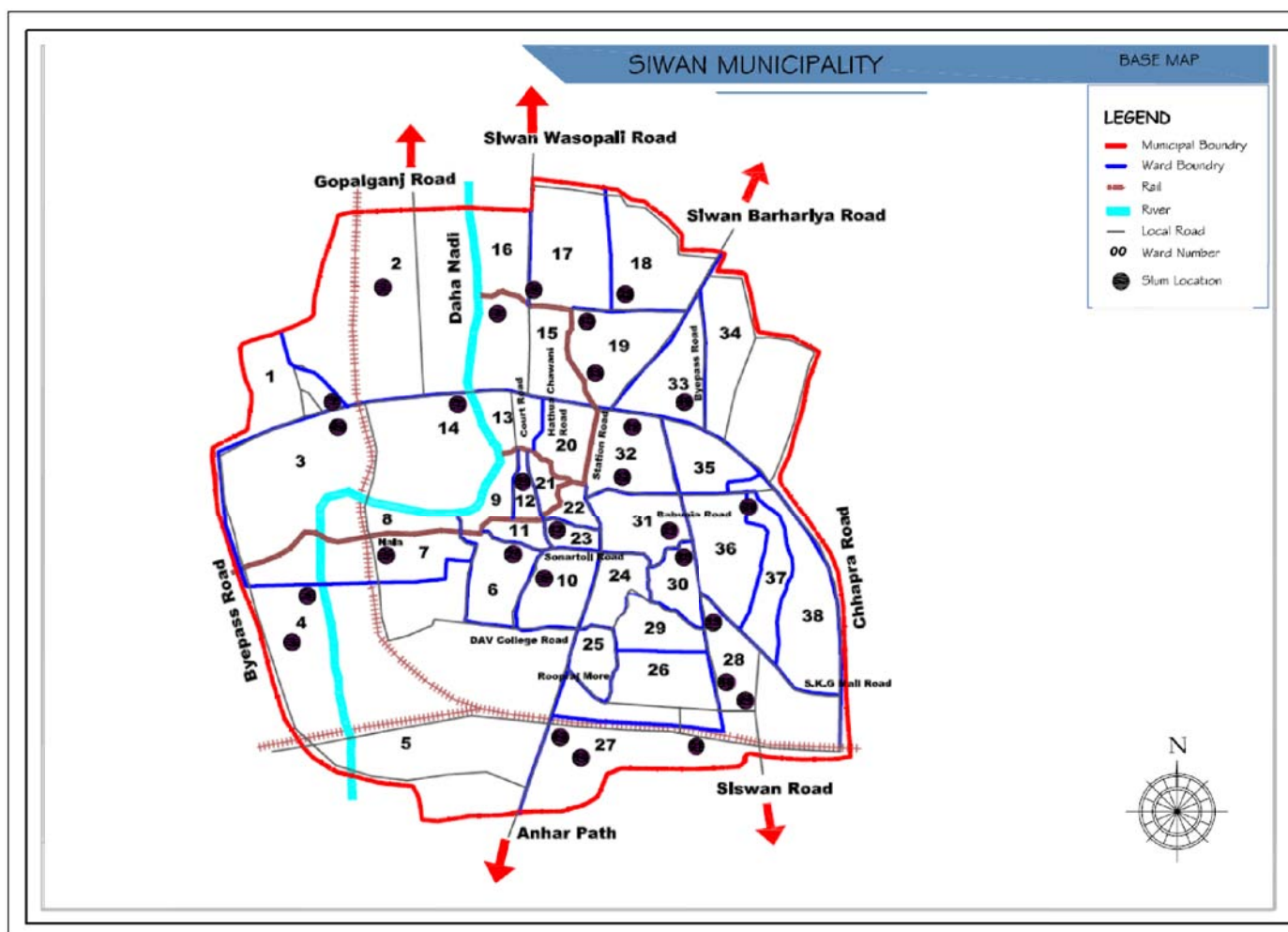
An overall assessment of the existing service delivery levels in the town was done on the basis of various indicators. Service levels are average or below average in most cases.

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	
	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

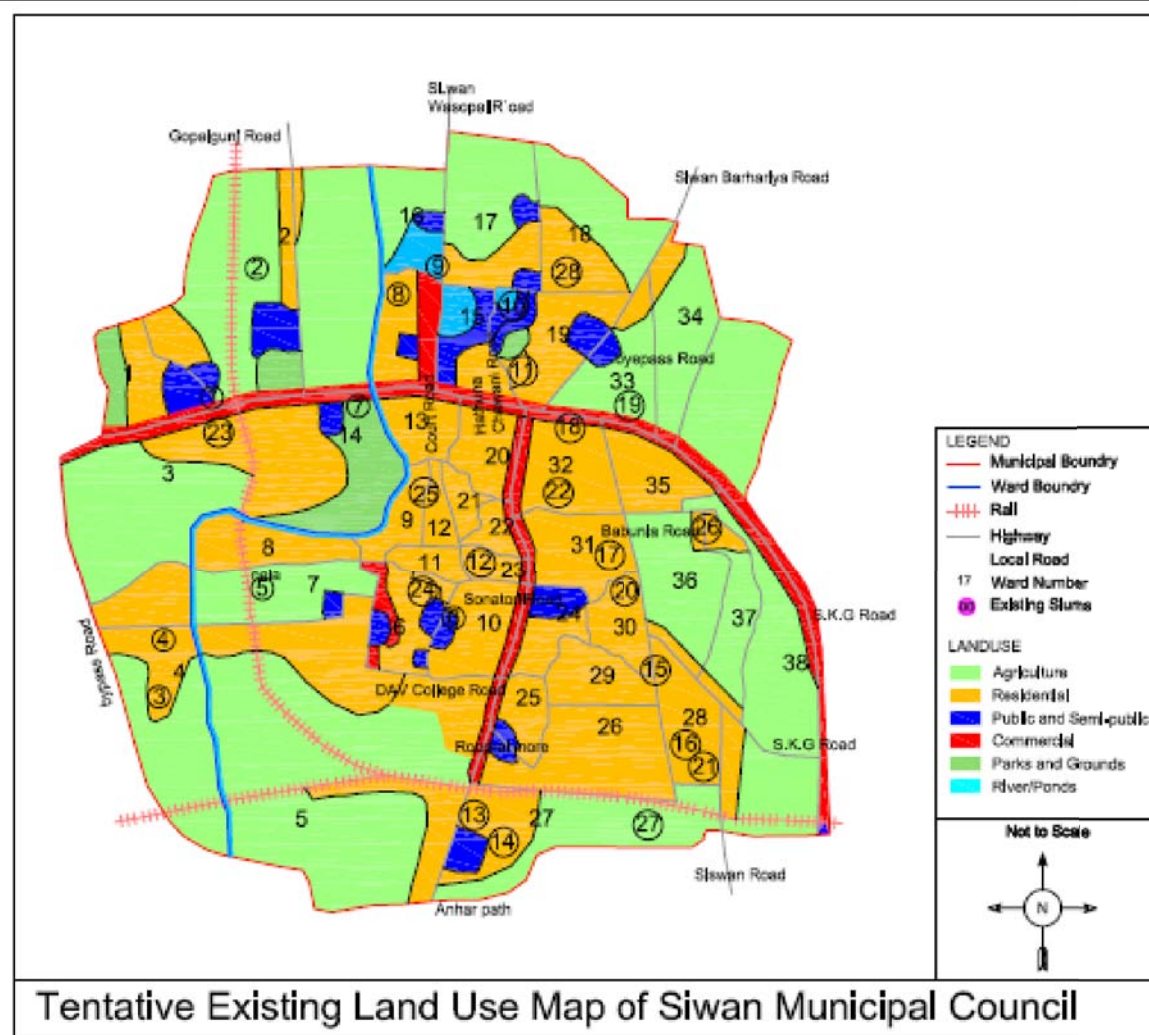
Alarming Average Below Average Good

Base Map: Siwan

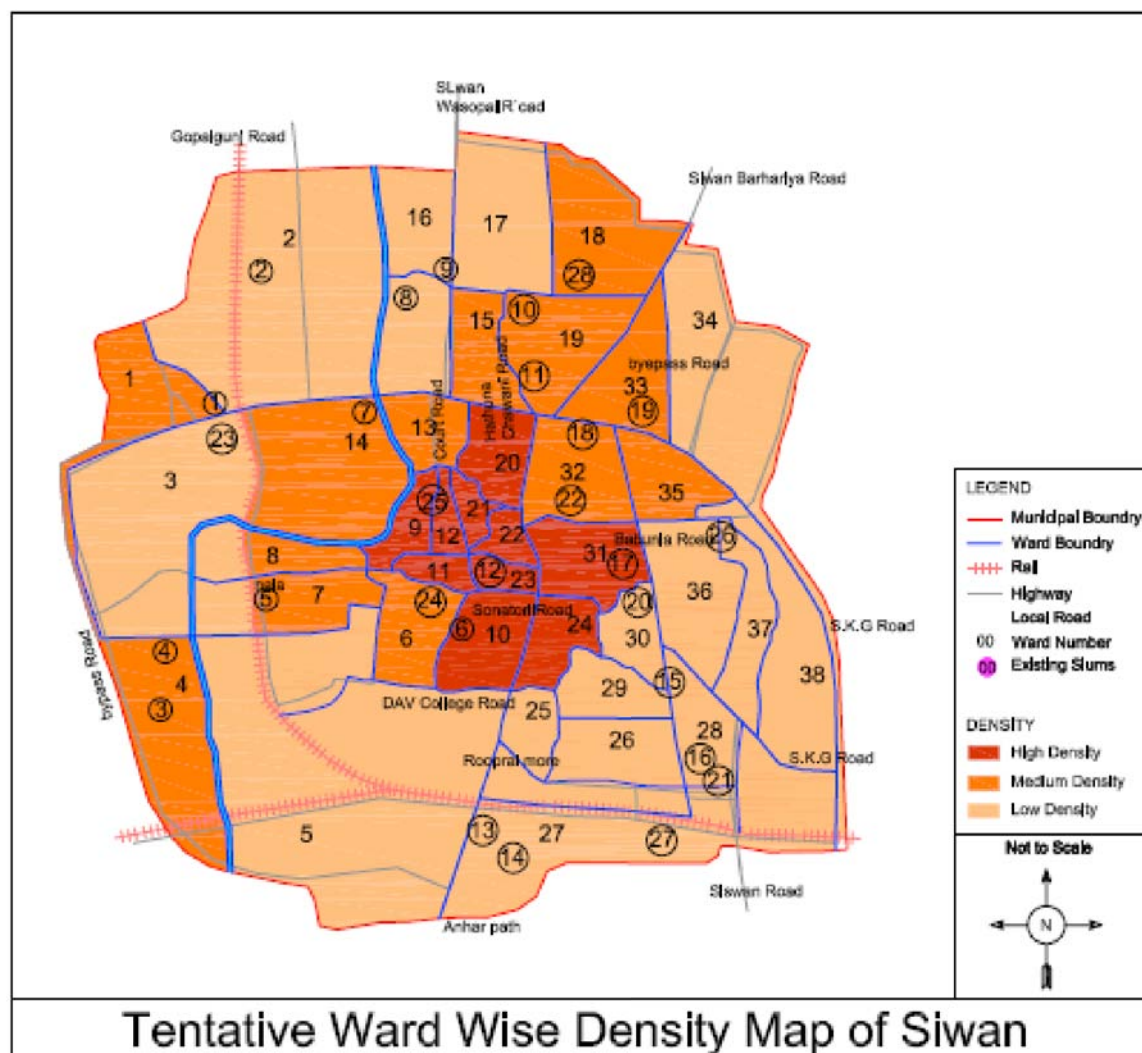


Source: Support Programme for Urban Reforms in Bihar (SPUR)

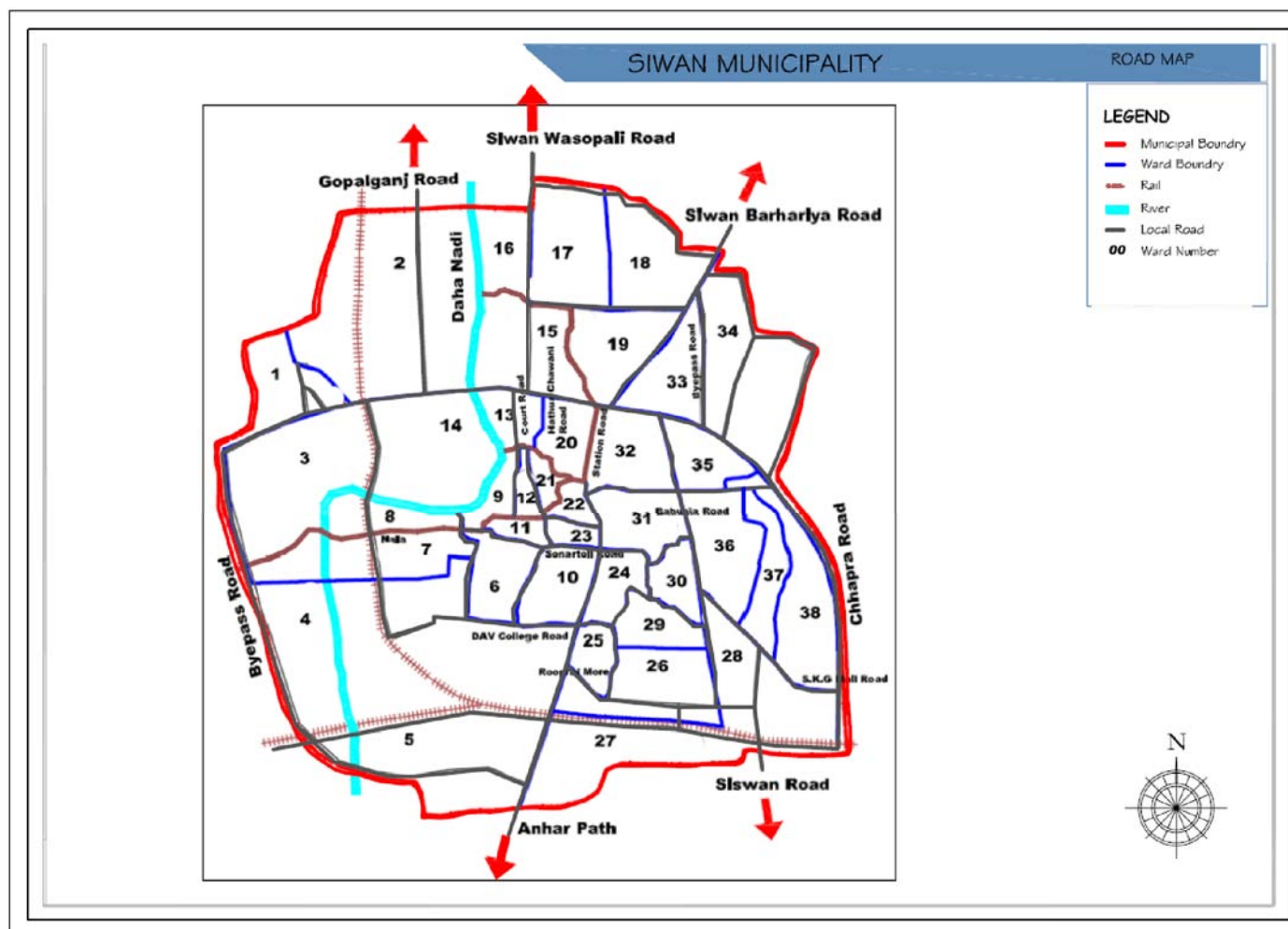
Present Land Use: Siwan



Ward-wise Density: Siwan

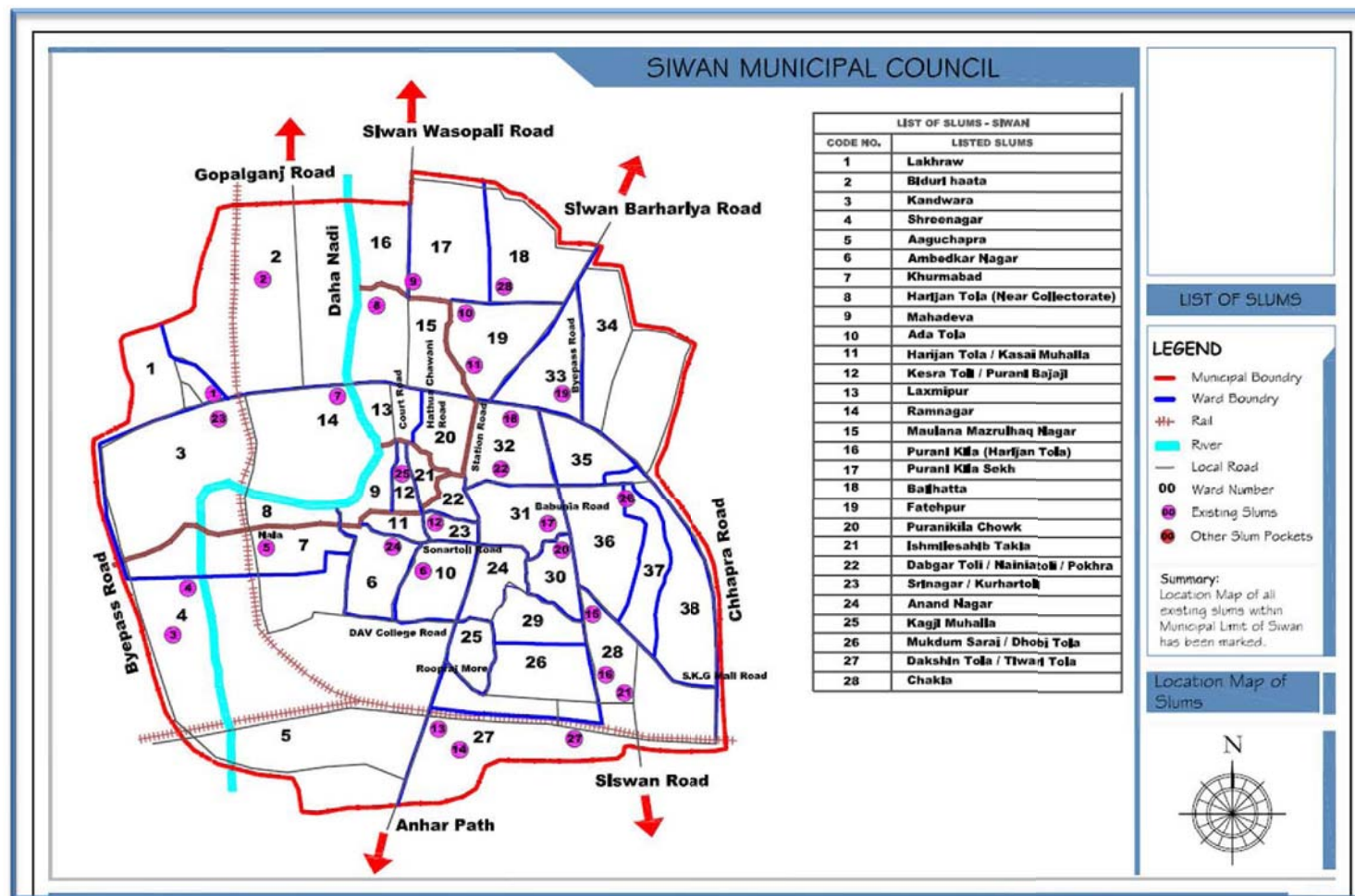


Road Connectivity: Siwan



Source: Support from Urban Reform in Bihar

Location Map of Slums: Siwan Town



Source: SPUR Survey; December 2010

