DIRECTORATE OF URBAN,
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Directorate of Urban, Regional Policy & Strategic Planning,
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"PREPARATION OF DEVELOPMENT MASTER PLANS OF MAJOR SECONDARY CITIES OF SINDH"

(PACKAGE # 3 - KOTRI, HALA, TANDO ADAM & MORO)

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STRATEGIC DEVELOPMENT PLAN REPORT

Hala City

EA Consulting Pvt Ltd
(Formerly Engineering Associates)
Engineering, Architecture & Project Management
Head Office: AL-9, 15th Lane, Khayaban-e-Hilal,
Phase VII, D.H.A., Karachi-75500.,
Tel: UAN: 111-111-584, Fax: (021) 3584-1625

PREPARATION OF DEVELOPMENT MASTER PLANS OF MAJOR SECONDARY CITIES OF SINDH

(PACKAGE # 3: KOTRI, **HALA,** TANDO ADAM & MORO)

STRATEGIC DEVELOPMENT PLAN REPORT – HALA

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ADP	Annual Development Plan
AGR	Annual Growth Rate
BC	Brick Construction
BHU	Basic Health Unit
BOD	Biological Oxygen Demand
CBD	Central Business District
CC	Climate Change
DBM	Digital Base Map
DCs	Deputy Commissioners
DHQ(s)	District Headquarters
DMP	Disaster Management Plan
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
DSPC	Development Strategies & Prevalent Condition
ECP	Emergency Contingency Plan
EDP	Economic Development Plan
EMC	Environmental Management Consultants
EPA	Environmental Protection Act
FWO	Frontier Works Organization
GBHS	Government Boys High School
GBHSS	Government Boys High Secondary School
GBLSS	Government Boys Lower Secondary School
GBPS	Government Boys Primary School
GER	Gross Enrolment Ratio
GGHS	Government Girls High School
GGHSS	Government Girls Secondary School
GGLSS	Government Girls Lower Secondary School
GGPS	Government Girls Primary School
GIS	Geographic Information System
GOP	Government of Pakistan
GOS	Government of Sindh
GPS	Global Positioning System
HESCO	Hyderabad Electricity Supply Corporation
HH	Household
HQ	Head Quarters
KV	Kilo Volt
LPG	Liquid Petroleum Gas
LULC	Land Use/Land Cover
MC	Municipal Committee
MISC	Multiple Indicator Cluster Survey
MW	Mega Watt
NER	Net Enrolment Ratio
NGO	Non-Governmental Organization

NPDMP	National & Provisional Disaster Management Policy
NRM	National Reference Manual
O&M	Operation & Maintenance
OH	Over Head
P&D	Planning & Development Department
PCU(s)	Passenger Car Units
PDAO	Planning & Development Act Ordinance
PDMA	Provincial Disaster Management Authority
PGS	Population Growth Scenarios
PH	Peak Hour
PHED	Public Health Engineering Department
PMTs	Pole Mounted Transformers
PR	Public Representative
PTCL	Pakistan Telecommunication Limited
RAP	Resilience & Adaptability Plan
RCC	Reinforced Cement Concrete
SAR	Situation Analysis Report
SB&TPR	Sindh Building & Town Planning Regulation
SBI	Sindh Board of Investment
SDI	Spatial Data Information
SECP	Securities & Exchange Connection of Pakistan
SED	Socio Economic Data
SES	Socio Economic Survey
SEPA	Sindh Environmental Protection Agency
SME(s)	Small Medium Enterprises
SOP	Standard Operation Procedures
SPPRA	Sindh Public Procurement Regulatory Authority
SS	Sample Survey
SSGC	Sui Southern Gas Company
STP	Sewerage Treatment Plant
SWM	Solid Waste Management
SWOT	Strength Weaknesses Opportunities Threat
TOR	Terms Of References
TSS	Total Suspended Solids
TVC	Traffic Volume Count
TW	Tube Well
UC	Union Council
UG	Under Ground
UG/l	Concentration of Arsenic (10 micro-gm/litre)
W&SD	Work & Services Department
WAPDA	Water and Power Development Authority
WATSAN	Water & Sanitation
WASH	Water, Sanitation & Hygiene
WB	World Bank
WHO	World Health Organization

STRATEGIC DEVELOPMENT PLAN REPORT-HALA

EXECUTIVE SUMMARY

I. Introduction

Sindh is the most urbanized province of Pakistan, with 53.7% of its population residing in urban areas as per the 2023 Census. Despite this, secondary and district headquarter (DHQ) cities have historically received limited attention in structured planning and coordinated public investment. This has led to fragmented infrastructure, unmanaged growth, and inadequate service delivery limiting their ability to function as engines of economic growth and reinforcing poverty in surrounding hinterlands.

This Strategic Development Plan (SDP) for Hala City has been prepared under Package 3 (Kotri, Hala, Tando Adam, Moro), awarded to EA Consulting Pvt. Ltd. The plan provides a 20-year roadmap (up to 2045) for sustainable urban growth, economic regeneration, and resilient service delivery.

The SDP framework covers:

- Sectoral assessments and SWOT analysis.
- Long-term and short-term development scenarios.
- Immediate Action Plan (IAP) for the core urban area.
- Economic Development, Climate Resilience, and Disaster Management Plans.
- Integration of Sustainable Development Goals (SDGs).
- A clear Implementation Strategy for phased execution.

This report therefore serves as both a technical blueprint and a policy guide for transforming Hala into a sustainable, resilient, and economically vibrant urban center by 2045.

II. District and City Overview

District Matiari covered an area 1,417 Sq.km and hosting population of 0.85 million (2023 Census), with 76% rural and urban 24%. The district is suitable for production of crops. Mainly during Rabi are wheat, oil seeds, berseem fodder, mutter and gram and in Kharif cotton, jowar, bajra and sugarcane. While also supporting livestock-based livelihoods. Matiari District, climatic zone is marked by hot and arid summers. The district receives limited rainfall, averaging approximately 17 millimeters annually.

Hala, a city and taluka of the Matiari district in Sindh, Pakistan, boasts a rich tapestry of history and cultural significance, with a population of 85,086 (2023 Census), projected to 158,000 by 2045, it is fastest growing urban center of the district. The city is strategically located on the N-5, with natural water resources from Shaikhani Minor. Hala town's growth is marked by southward expansion along major highways enhancing connectivity and commerce, eastward development fostering infrastructure and services, and northward progress boosting regional accessibility and economic opportunities.

Spatial analysis highlights that agriculture dominates (46.4%), followed by residential (35.6%), transportation (5.2%), commercial activity (4.4%), and industry (0.9%). Recreational areas cover less than 0.1%, underscoring deficits in livability.

III. Vision for the Strategic Development Plan

The Strategic Development Plan (SDP) for Hala has been formulated through a participatory and evidence-based process, combining technical assessments with citizen input gathered during the consultative workshop held on **24 July 2024**. The vision builds upon identified challenges in infrastructure, services, and economic opportunities, while reflecting community aspirations for a livable, inclusive, and economically vibrant city.

Vision Statement

The city full filling all the basic needs, such as housing, water supply and sanitation, in clean and sustainable pollution free environment, with education and health for all, along with growth in local and regional economy with increase in employment, incomes and related skills development to emerge as well-planned modern city with peace, security and prosperity like some of the best most liveable cities in the world.

IV. Proposed Master Plan of Hala City

The Proposed Development Master Plan for Hala City presents a comprehensive framework to guide its transformation into a sustainable, compact, and resilient urban center by 2045. Building on the city's strategic location within Matiari District and its established role as a hub for trade, agriculture, and industry, the plan integrates strategic spatial growth with robust infrastructure development and environmental stewardship.

The plan is the result of extensive analysis and stakeholder consultation, which evaluated three alternative growth scenarios: **Cultural and Heritage Preservation**, **Agricultural and Agro-Industrial Development**, and **Mixed Development.**

Stakeholders unanimously endorsed the **Agricultural and Agro-Industrial Development** scenario as the preferred strategy.

This chosen path ensures a foundation for orderly growth, improved service delivery, and an enhanced quality of life for residents, solidifying Hala's role as a key regional center in Sindh.

PROPOSED MASTER PLAN OF HALA CITY

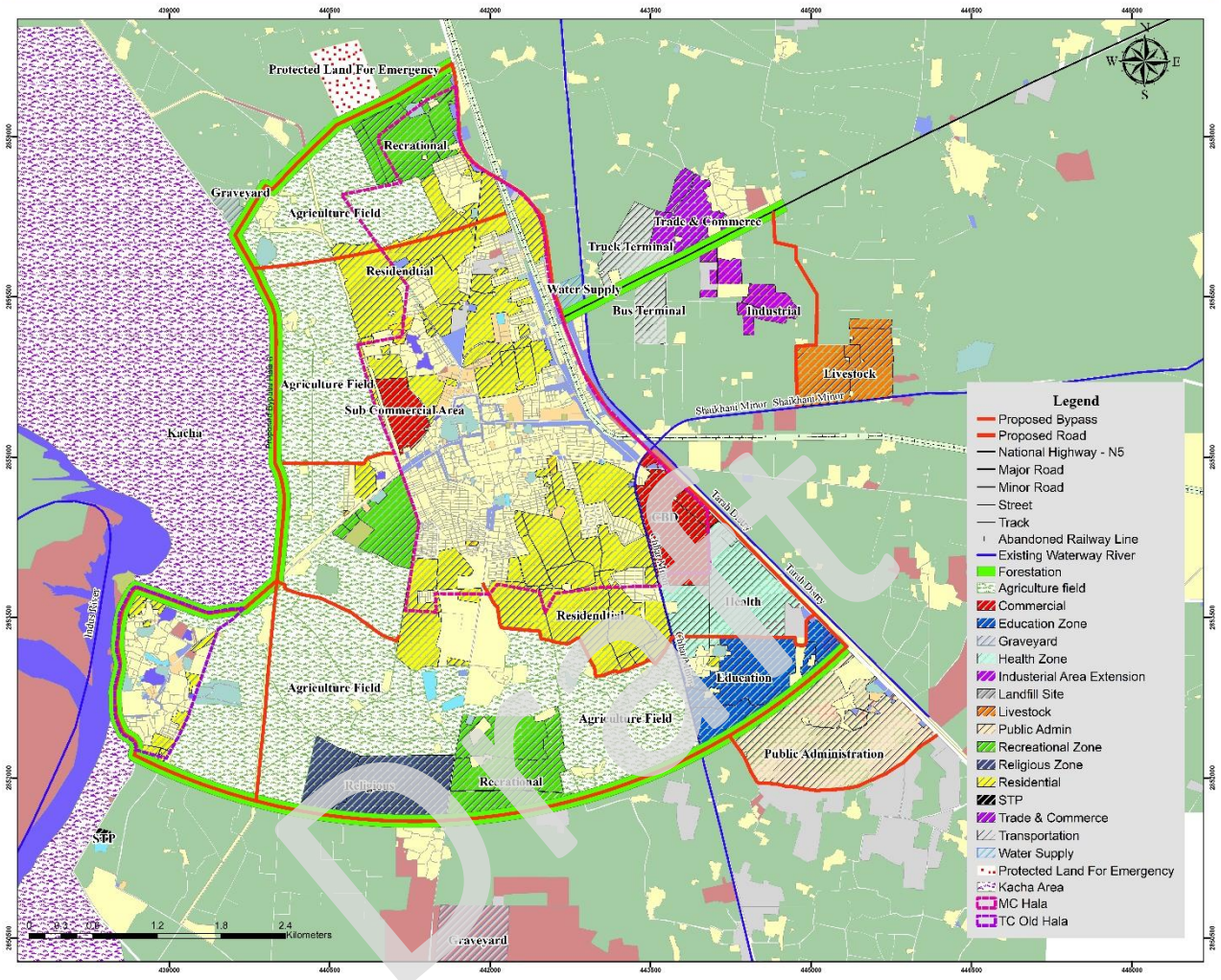


Figure 0-1: Master Plan of Hala City

V. Housing

Housing in Hala City Faces significant challenges, despite relatively high ownership (≈86%) and a predominance of pacca structures. The 2023 Census recorded 15,509 units with an average household size of 5.6, yet informal growth, katchi abadis, and inadequate basic services remain widespread. By 2045. Demand will rise to 28,584 units, requiring structured interventions to avoid further informal expansion and to improve conditions in the core urban areas where sanitation, drainage, and housing quality are poor.

The Strategic Development Plan proposes a dual approach: planned expansion with affordable housing schemes, and upgrading of existing informal settlements. Key strategies include land banking and pooling, microfinance for incremental housing, public–private partnerships for low-income projects, and regularization/upgradation of katchi abadis. Immediate priorities focus on low-income housing schemes (≈220 units in Phase 1) and rehabilitation of the core urban area through façade improvements, street and pavement upgrades, and solar street lighting. These interventions aim to expand housing supply, improve livability, and ensure that growth is both affordable and sustainable.

VI. Education

The education sector in Hala City is marked by overcrowding, inadequate infrastructure, and limited access to quality facilities. Despite strong demand, public schools and colleges face a classroom shortage of nearly 946 rooms (2025 baseline), with many institutions requiring urgent repairs, furniture upgrades, and provision of essential services such as toilets, water, and electricity. Higher education options remain limited, with only one social university's campus, while technical training is severely underdeveloped. Barriers of affordability, poor infrastructure, and insufficient teachers reinforce inequalities, leading to low enrolment, high dropout rates in some schools, and weak skill development for youth.

The Strategic Development Plan aims to strengthen existing schools' system, classroom establishment of technical and vocational training facilities. Short term measures focus on upgrading/rehabilitation of schools in core urban area, while long-term strategies include adding more than 1,950 classrooms by 2045, establishing new education zones, and integrating digital learning. Priority projects include the extension and rehabilitation of schools with ~28 new classrooms (PKR 800 million). These interventions, aligned with SDG 4 (Quality Education), aim to raise literacy, improve equality in access, and prepare Hala's youth for emerging economic opportunities.

VII. Health

The health sector in Hala City faces critical shortages in both infrastructure and human resources. The Taluka Headquarters (THQ) Hospital, with only 98 beds and significant vacancies among medical staff, is overstretched, serving nearly 900 outpatients daily. Current ratios fall far below national and WHO standards, with only one bed for every 3,330 residents (against a target of 2 per 1,000) and just 48 doctors for a population of 88,000 (against a need for 88). Basic facilities, including diagnostic equipment, laboratories, and emergency services, are outdated or insufficient, while the 2022 floods further exposed the fragility of the healthcare system.

The Strategic Development Plan prioritizes rehabilitation of existing facilities, expansion of bed capacity, improved diagnostic and emergency services, and workforce development. Short-term actions include upgrading THQ Hospital and dispensaries, expanding mobile health units, and introducing digital health systems, while long-term strategies focus on sustainable workforce development, and climate-resilient infrastructure. Priority projects (estimated at PKR 700 million) include THQ extension, provision of mobile units, diagnostic upgrades, and training programs. These investments, aligned with SDG 3 (Good Health and Well-Being), aim to build a resilient health system capable of meeting the needs of Hala's growing population.

VIII. Recreation, Culture & Tourism

Hala City has only three recreational places, one Sarwari Park, Memon Sports Complex (under construction), and Mehran Paradise Point located at embankment of Indus River. Public health Ground is in very deteriorated condition which is not in use currently. Hala City faces a scarcity of green spaces despite being a densely populated urban area. Limited recreational and park facilities negatively impact residents' well-being and outdoor activity opportunities. Existing parks are overcrowded due to uneven distribution across the town. Hala requires more green and recreational spaces to meet the needs of its growing population. Existing parks and sports complexes are insufficient and poorly maintained. Priority should be given to developing new parks in underserved areas, upgrading existing facilities, ensuring access to women and children, and creating cultural spaces for events.

The Strategic Development Plan emphasizes creating new community parks, rehabilitating existing recreational places, and integrating eco-friendly features such as solar lighting, drought-resistant landscaping, and stormwater management systems. Long-term strategies include creating new recreational places to fill the need of population by 2045. Priority projects (PKR 350 million), including Rehabilitation/upgradation of Public Health Ground, amusement parks, Sports complex, large parks and conservation of Historical places and Cultural Heritage for Hala city. These initiatives, aligned with SDG 11 (Sustainable Cities and Communities), aim to enhance livability, preserve heritage, and stimulate local economic activity through recreation and tourism.

IX. Water Supply

Currently, Hala has no water supply network and majority of the people use groundwater to meet their demand of water for drinking and domestic purposes. The surface water is available in the form of Shaikhani Minor which is passing in the East of the city, which needs supply and distribution network. To consider the need of water for existing population and demand for population in the year 2045 the 30 gallons per capita per day (gpcd) was used as given in NRM under domestic water demand. The given standard in NRM is 25-30 gpcd for house connection with partial plumbing (with pour flush toilet). the need and demand of water for existing population of 2025 is 2.65 MGD and for the projected population in the year 2045, after twenty years of time it will increase about two times the existing demand of water supply i.e. 4.74 MGD.

The Strategic Development Plan builds on the Sindh Drinking Water Policy 2017 and sets clear priorities. These include developing criteria for installation of new drinking water supply schemes and ensure that

all new schemes are safely managed, rationalized and constructed through need-based criteria so that all area and communities are served. Priority projects amounting approximately (PKR 2,100 million) include construction of water supply system and feasibility study and procurement of land which amounting approximately PKR 400 million aiming to provide safe, reliable, and equitable access to clean drinking water supply in line with Sustainable Development Goal 6.

X. Sewerage and Drainage

At present, the majority of Hala Town's sewage is managed through open drains, which account for about 92% of the total system. These drains are conspicuous along roadsides, encircling residential areas, markets, and even healthcare facilities. The design of these open drains, with their steep side slopes, is a heritage of past planning practices. Although these open channels have historically served the dual purpose of sewage and stormwater runoff, they now pose severe sanitation and safety risks. The exposure of wastewater can lead to contamination and health hazards, while the steep slopes present accident risks for pedestrians and vehicles alike. A significant number of hospitals, clinics, and residential units discharge their wastewater directly into these open drains. This practice not only exacerbates pollution but also poses grave health and hygiene risks to the town's inhabitants. The town is divided into zones, each with unique drainage challenges. Most areas rely on surface drains that lack comprehensive coverage and advanced disposal mechanisms. In 2025, with a population of 88,463, the city's water demand is estimated at 2.65 MGD (Million Gallons per Day), leading to an expected sewerage flow of approximately 2.12 MGD, assuming 80% of the water supply converts to wastewater. As the population grows to 158,052 by 2045, the water demand is anticipated to rise 4.74 MGD, resulting in an estimated sewerage flow of 3.79 MGD.

The Strategic Development Plan prioritizes rehabilitation of deteriorated drains, development of a separate stormwater drainage system, establishment of modern wastewater treatment plants, and integration of climate-resilient solutions such as retention basins and recharge wells. Immediate action is required in the core urban areas, where overflows and blockages are most acute, with a PKR 1,500 million rehabilitation program proposed to safeguard public health, improve sanitation, and build resilience against monsoon flooding.

XI. Solid Waste Management

Hala City currently grapples with various challenges in its solid waste management system. The collection mechanism includes primary, secondary, and tertiary methods, with limited human resources dedicated to these tasks. Although there are 314 sanctioned employees in the schedule of the Municipal Committee, the actual number of employees is the same. The number of sweepers and cleaning staff is a mere 191, which is significantly lower than the required 200 for effective solid waste management. All biomedical waste is mixed with domestic municipal waste, which is not suitable for the health of the people residing in the area. It is necessary that hazardous waste must be separately collected and disposed, rather incinerated. The absence of a sanitary landfill, proper segregation, and hazardous waste handling has resulted in serious public health and environmental concerns. In 2025 Hala City, with an estimated population of 88,463 persons, is expected to generate an estimated (39.80 metric tons) of solid waste and

by the year 2045 it will be 71.12 metric tons will be generated by the projected population 158,052 persons requiring significant upgrades in infrastructure, staffing and systems.

The Strategic Development Plan proposes the feasibility study for solid waste management mechanism in Hala. Immediate actions in the core urban area focus on deploying community bins, expanding municipal fleet capacity, public awareness campaigns, and user-free based service models. Together, these measures will align Hala with Sindh Solid Waste Management Policy, improve urban cleanliness, and enhance public health resilience.

XII. Firefighting

Hala City does have firefighting services available to address emergency situations. Currently, there are two fire-fighting vehicles operational within the Municipal Committee of Hala. However, to meet the city's fire-fighting needs effectively, an additional two fire-fighting vehicles are required as suggested by the MC Office. At present 02 fire brigade with equipment are present in Hala town. The sanctioned number of fire-fighting staff in the Municipal Committee of Hala is 32. This team of actual fire-fighting staff is responsible for managing emergency fire incidents within the city. However, to ensure comprehensive fire-fighting coverage and readiness, an additional 48 fire-fighting staff members are needed in the Municipal Committee of Hala MC.

The Strategic Development Plan proposes expanding firefighting infrastructure through the establishment of additional fire stations and sub-stations, recruitment and training of staff, and ensuring readiness of vehicles with adequate POL and spare parts. Measures such as integrating sprinklers in multi-storey buildings, early warning systems, and community-level training in evacuation, first aid, and fire response will strengthen preparedness. Together, these interventions will enhance the city's resilience, reduce fire-related losses, and align emergency services with the growing needs of Hala's population.

XIII. Transportation

Hala is situated on the National Highway (N5), which is a major artery of communication in Pakistan. This highway provides Hala with direct road links to many of the country's major cities. Road conditions vary sharply: several primary corridors are serviceable, yet many secondary and tertiary streets suffer from pavement failure, poor drainage, encroachments, and unmanaged rickshaw and Qingqi staging. As of October 26, 2023, the station has been officially abandoned and non-operational since the early 1980s. This means no passenger or freight trains currently service the station. Hala City currently lacks major bus and truck stands within its urban infrastructure. In the absence of a formalized bus and truck stand system within town, residents often rely on alternatives. Some bus and van stops have been established, offering essential services to the commuting population. Notable stops include the Shaheed Makhdoom Ammar Haider, Dargha Road Stop, Bypass link Stand, and the Coach Bus Stand located near the Baghari bus Stand Road. Additionally, along the Mawasihi Mandi area, trucks and loaders are parked along Road, further adding to the transportation options within the city. A traffic study conducted in Hala City highlights the dominance of motorcycles and Qingqi rickshaws in the overall traffic composition, reflecting the city's reliance on low-cost and flexible modes of transport. The analysis of travel time distribution indicates a

relatively even pattern across the city, with only a small proportion of respondents experiencing significantly longer travel times than the average, suggesting localized variability rather than citywide congestion.

The plan prioritizes a practical blend of network rehabilitation and system management. Short term actions focus on repairing priority corridors, installing solar street lighting, organizing paratransit stands, restoring drainage along roads, marking crossings, and enforcing parking and encroachment rules in the core. Long term actions develop a modern bus terminal with universal access, add formal truck facilities, and introduce smart traffic control, cycling lanes, and pedestrian upgrades that meet accessibility standards. Three priority projects anchor delivery: rehabilitation of secondary and tertiary roads with integrated side drains, citywide street lighting, and a new bus terminal on the outskirts supported by a feasibility study and land procurement. An immediate action package for the core commercial spine realigns curb space, improves surfaces and markings, and adds green medians and signals to cut delays and improve safety.

XIV. Energy

Hala City primarily relies on HESCO (Hyderabad Electric Supply Company) for its power supply, which has one main grid station that handles the electricity distribution for the area. The city benefits from relatively robust infrastructure, survey results ensuring that 80% of residents have access to electricity, indicating a widespread distribution network and substantial number of residents have adopted alternate power solutions, particularly solar energy. Approximately 30% of households report using alternative power sources, with solar energy emerging as the most popular, with 90% respondents relying on it to meet their energy needs.

The Strategic Development Plan envisions strengthening conventional infrastructure while diversifying into cleaner, more sustainable energy. Short term actions include upgrading the existing grid station, adding substations to ease transformer loads, and promoting household energy-efficient devices. Long term strategies focus on mainstreaming solar and wind through feasibility studies and pilot projects, encouraging energy-efficient building design, and supporting women-led awareness programs on fuel-use practices. Together, these measures aim to provide Hala with a stable, efficient, and future-ready energy system aligned with sustainable urban growth.

XV. Gas Supply

In Hala Town, the contrast between the old and new town is striking. The New Hala Town, driven by a burgeoning population and small industrial activities, faces an increasing demand for natural gas that often surpasses the supply capacity. Residents and business owners here contend with intermittent gas supply, affecting daily life and economic activities. The situation worsens during peak consumption periods, exacerbating the issue's severity. This inconsistency not only disrupts the comfort of domestic users but also hampers the operational capabilities of local industries heavily reliant on gas for energy. According to surveyed household reported insufficient gas supply, forcing many residents to rely on wood (98%), coal, or cylinders as alternate fuels. These practices raise environmental concerns and health risks while highlighting inequities in service provision.

The Strategic Development Plan calls for improving gas distribution networks to underserved neighborhoods, addressing pressure management, and exploring alternative clean energy options such as biogas, LPG expansion, and solar for cooking and heating. Policy directions include demand-side efficiency, rationalized pricing of energy resources, and measures to mitigate the impact of load-shedding. Together, these interventions aim to ensure equitable, affordable, and sustainable energy access for Hala's growing population.

XVI. Communication

As Reported by PTCL officials, Hala City is served by two PTCL (Pakistan Telecommunication Company Ltd) but a significant portion of the population does not rely on landline services, with approximately 84% of residents reporting the absence of PTCL or landline telephone connections. Instead, the overwhelming majority rely on cellular or mobile phones as their primary mode of communication.

The Strategic Development Plan proposes short-term improvements through upgrading mobile towers for 4G/5G readiness, expanding PTCL and mobile internet services, and running awareness campaigns. Long-term priorities include extending fiber-optic networks, establishing a digital innovation hub, and introducing smart city initiatives to strengthen connectivity and support inclusive growth.

XVII. Economic Development

Matiari is a fertile district with its economy predominantly based on agriculture, oil and gas industries, sugarcane, wheat, and vegetables. The district is home to sugar mills, chemical factories, oil and gas companies, cotton factories, ice factories, flour mills, handicrafts, businesses, and shops, among other economic activities. Despite its economic potential, Hala faces several challenges. These include high youth unemployment, limited industrial diversification, weak infrastructure and logistics, low women's participation in the workforce, and climate-related risks that threaten agricultural productivity. Development Plan focuses on modernizing agriculture and allied industries, expanding trade and ICT enterprises, promoting industrial estates and small business clusters, building skills and entrepreneurship, and improving enabling infrastructure and market linkages under a transparent, investment friendly framework aligned with SDGs.

a. Agricultural

Matiari contributes significantly in agriculture sector of Sindh because its climate is suitable for production of various food items including the Kharif crops of maize, rice, sugarcane, cotton and the Rabi crop of wheat. In addition to these, fruit orchards are abundant in this district. District Matiari is irrigated by Sukkur Barrage including Rohri Canal and its ditributary. Tube wells are also used to extract ground water for irrigation purposes and rain water is collected and stored in ponds, tanks and other structures for irrigation.

The strategy prioritizes higher productivity through modern technologies and quality inputs, climate resilient farming, better data and extension, post-harvest storage, and farm to market access. Immediate economic measures include expanded credit for small and medium farmers, improved canal management and drainage, deployment of solar and efficient tube wells, and construction and maintenance of rural roads to cut losses and raise farm incomes.

b. Livestock

District Matiari is richly populated area having animal's population 266,906 of large and small animals including fish. The comparison of livestock quantity of Sindh Province with the district Matiari indicate that highest share of Buffalos is 3.20%, then 2.60% Goats and then 3.90% is of cattle. The 2022 floods highlighted the sector's vulnerability, causing the death of nearly 6,788 animals and destroying grazing pastures, leading to severe feed scarcity and economic losses.

Key challenges include landlessness, fragmented holdings, reduced natural grazing areas, lack of veterinary extension services, and climate-induced risks. While Matiari has zero veterinary hospital and only 28 centers, Hala lacks a dedicated facility, underscoring service gaps. The Strategic Development Plan prioritizes model farms, cooperative dairy initiatives, improved veterinary coverage, and productivity gains through deworming, vaccination, feed supplementation, and value addition. With its labor force and pasture potential, livestock products can be scaled into industry-linked value chains, enhancing food security, livelihoods, and rural incomes.

c. Fisheries

According to Sindh District Profile 2023, the total production of fish in district Matiari was 30 MTs and in Sindh it was 133,150 MTs, which is i.e. 0.02% if compared with the of total fish production of Sindh. The number of total boats available for sailing purpose in District Matiari is 24. The sector remains underdeveloped, with limited policy support, poor infrastructure, and outdated practices restricting productivity and long-term sustainability.

The Strategic Development Plan emphasizes the need for a dedicated district-level fisheries policy, private sector participation, aquaculture promotion, and capacity building through training and extension services. Priority measures include fish seed stock replenishment, sustainable fishing practices, value addition (processing, packaging, and cold storage), and improved market linkages. Establishing fish farms in suitable areas, supported by government and private investment, will modernize the sector, enhance resilience, and expand employment opportunities, aligning fisheries with the broader vision of inclusive economic growth for Hala and Matiari District.

d. Industries

Matiari is fertile District having its economy based mostly on Agriculture, Sugarcane, Wheat and vegetable. It has Matiari Sugar Mill, Chemical Factory, Cotton Factory's, Agriculture Khooh Noor Cotton Factory, Ice Factory's, Floor Mills, Handy Craft, Business & shop keeping, etc. The progress of economic activities in the district depends upon facilitation to farmers by using modern techniques now and surely in the future. The district as a whole is well-known due to its characteristic of agriculture engine which serves all over Sindh by using market of Hyderabad, the regional Hub. These are the source of employments for residents of district Matiari However, challenges persist, including limited diversification, weak infrastructure, absence of an industrial estate policy, and vulnerability to economic and environmental shocks.

The Strategic Development Plan emphasizes revitalizing the Small Industrial Estate, expanding agro-based and cottage industries, promoting value addition in local products, and strengthening workforce skills through vocational training. Public–private partnerships, investment incentives, and improved market and

supply chain linkages are proposed to attract investment and generate employment. Which will also modernize facilities, create jobs, and enhance industrial competitiveness while integrating green buffers to mitigate environmental impacts.

e. Trade & Commerce

Hala boasts a robust local retail market, primarily embodied by Shahi Bazaar and along both sides of Old Dargah Road. The entire commercial areas in the city including malls, shops, hotels, restaurants, workshops etc. are providing a wide variety of goods and services which are located the city in particular on Dargah Road. However, unplanned business activities, the decline of traditional agricultural markets, weak PPP performance, and inadequate infrastructure undermine trade efficiency and growth.

The Strategic Development Plan proposes modernizing bazaars, developing a wholesale market with cold storage and logistics, and promoting artisan-based industries through organized trade clusters and digital platforms. The Immediate Action Plan focuses on the core commercial zone (Shahi Bazar) by upgrading infrastructure, improving pedestrian access, relocating hawkers to organized vending zones, and introducing smart technologies. Priority provision of fruit and vegetable market and provision for street hawkers (PKR 1,650 million) aim to reduce congestion, strengthen market accessibility, and enhance the shopping environment, thereby improving business activity and aligning with SDGs 2, 8, and 11.

XVIII. Environment

The environment of Hala and District Matiari is shaped by its alluvial plains, Indus River flood zones, and a canal-irrigated agrarian landscape, interspersed with patches of saline and waterlogged soils. While the area benefits from fertile land and a well-developed irrigation system, challenges such as soil degradation, salinity, and waterlogging persist—largely due to poor drainage and over-irrigation. The district lies in Seismic Zone 2A, indicating moderate earthquake risk, which has implications for infrastructure resilience. Biodiversity has suffered due to habitat loss and forest degradation, though riverine forests along the Indus still support avian populations and limited wildlife. Ambient air quality remains generally within safe limits. Noise pollution remains within acceptable levels but is anticipated to rise with urban expansion. Environmental vulnerabilities are compounded by climatic extremes, overexploitation of groundwater, and forest pressure, requiring integrated, climate-resilient planning to sustain both ecosystems and livelihoods.

The strategic plan calls for sustainable land and water management, biodiversity conservation, pollution control, and climate adaptation. Long-term measures emphasize rehabilitating drainage systems, promoting salt-tolerant crops, wetland and forest management, industrial effluent control, and climate risk mapping. Short-term priorities include emergency drainage, wetland monitoring, reed-based livelihood support, stricter pollution bylaws, urban flood preparedness, and community training. Together, these interventions aim to balance ecological conservation with urban growth, strengthening resilience to climate change while safeguarding natural resources for future generations.

XIX. Disaster Risk Management

Hala and Matiari District face recurring climate and disaster-related threats that critically endanger lives, livelihoods, and public systems. Devastating floods in 2010, 2011, 2012–13, and 2022 submerged

farmland, destroyed homes, and disrupted healthcare and basic infrastructure, with central and western Hala particularly prone due to large catchment areas and inadequate drainage. Alongside flood risks, the region grapples with recurring droughts, groundwater scarcity, and rising heat extremes, placing further strain on food security and forcing rural displacement. Without coordinated planning and urgent infrastructure investments, Hala remains highly exposed to compounding environmental and urban stresses.

Disaster risk management in Hala is guided by the Sindh DRM Policy and coordinated through the Provincial and District Disaster Management Authorities, supported by municipal committees, taluka administrations, and community organizations. However, weak infrastructure, insufficient municipal capacity, and poor enforcement of building and environmental standards undermine preparedness and response. The Strategic Development Plan sets out short-term measures such as flood forecasting, drainage clearance, medical readiness, and public safety systems while laying the groundwork for long-term resilience through climate-resilient infrastructure, integration of risk mapping into land-use planning, and community-based disaster preparedness. A flagship priority is the establishment of a dedicated Emergency Shelter and Disaster Resilience Hub, designed to provide safe, well-equipped refuge for over 6,000 people in times of crisis. Together, these initiatives aim to safeguard lives, strengthen institutions, and build a more resilient urban future for Hala.

XX. Climate Change Emergency Contingency Plan

Hala and Matiari District face mounting climate risks: rising temperatures, more intense monsoons, and prolonged water stress. Historical trends (2010–2022) show summer highs regularly exceeding 45°C, with peak heat around May–June, and rainfall that has become increasingly erratic. The 2022 monsoon highlighted this volatility—bringing exceptional rainfall, triggering flash floods, and inundating low-lying areas across Matiari. Flat terrain and underdeveloped drainage systems amplify vulnerability, with waterlogging and poor urban runoff management worsening flood impacts. The 2022 floods caused widespread damage: 250,000 people were affected, 51,000 displaced, 26,662 homes destroyed, and over 140,000 acres of crops lost. Livestock deaths exceeded 6,700, undermining rural livelihoods and food security. Recurrent outbreaks of dengue, diarrhea, and malaria followed stagnant floodwaters, creating a public health crisis.

The district plan aligns with Sindh's Climate Change Policy 2022 and national frameworks (MoCC/NCCP, SEPA/DoCC), integrating with resilience programs (RRU, SFERP, SPHF). It emphasizes immediate preparedness—early warning systems, climate-informed land use planning, seasonal forecasting, drainage network upgrades, and emergency health and evacuation capacity. Long-term adaptation focuses on resilient agriculture (crop diversification, water-efficient irrigation), livestock sheltering, solar-powered public services, safe drinking water supply and storage systems, and flood-resilient infrastructure (roads, bridges, schools, health facilities). Structural measures include rehabilitation of canal and drainage systems, construction of retention basins and pumping stations, resilient housing codes, and urban green corridors to reduce heat stress. Cross-cutting actions strengthen local institutions, improve financing access (including PPPs and climate funds), and engage union councils and communities to embed resilience into all development decisions.

XXI. Sustainable Development Goals for Hala

In Hala, socioeconomic surveys reveal pressing challenges across food security, healthcare, education, water and sanitation, energy, livelihoods, and urban growth. To address these, seven SDGs have been selected for integration into the Strategic Development Plan: Zero Hunger, Good Health and Well-Being, Quality Education, Clean Water and Sanitation, Affordable and Clean Energy, Decent Work and Economic Growth, and Sustainable Cities and Communities. Each is mapped to relevant sectors such as agriculture, health, WASH, education, energy, industry, and land use planning. Sector strategies specify outputs, indicators, and timelines that feed into the city's SDG monitoring system and connect to provincial reporting.

The Strategic Development Plan provides the overarching framework for aligning local development with the 2030 Agenda. A separate SDG Implementation Plan complements this framework with detailed baseline analysis, target-to-indicator mapping, and implementation matrices. Together, they ensure that urban growth in Hala is directed toward sustainability, inclusivity, and resilience while contributing to national and global SDG commitments.

XXII. Urban Land Management

Urban land management in Hala reflects broader challenges faced across Sindh, where the supply of serviced and affordable land has not kept pace with rapid population growth. The absence of a provincial policy framework, weak enforcement of zoning, and limited financial capacity of municipal bodies have led to unplanned expansion, conversion of fertile agricultural land, and rising informal settlements. Issues such as outdated land use plans, corruption in land governance, and infrastructure stress from poorly regulated housing and commercial schemes further aggravate the situation.

The Strategic Development Plan emphasizes introducing modern land management tools such as Land Pooling and Reconstitution (LPR), Guided Urban Development (GUD), and Transferable Development Rights (TDRs) to ensure a steady supply of serviced land while safeguarding agricultural zones. Immediate priorities include cadastral surveys, digitized land records, and pilot LPR projects in peri-urban areas, along with enforcement of zoning bylaws to curb haphazard development. In the long term, strategies focus on establishing land banks, PPP-based industrial and commercial zones, peri-urban agriculture protection, and redevelopment of katchi abadis through inclusive models. These measures, aligned with existing legal frameworks, provide a pathway for sustainable, equitable, and resilient urban expansion in Hala.

XXIII. Implementation Strategy

The successful execution of the Strategic Development Plan hinges on a clear institutional framework, phased implementation, and diversified funding. The Hala Urban Development Authority (H-UDA) will be established as the central coordinating body, operating initially within the Municipal Committee before evolving into an autonomous entity. Implementation will be phased: short-term (1-3 years) focuses on establishing the H-UDA, digitizing land records, and launching pilot projects; medium-term (4-10 years) scales up land pooling and priority infrastructure; and long-term (10-20 years) advances regional integration and climate-resilient development.

Funding will be mobilized through provincial development programs (ADP/PSDP), municipal budgets, donor partnerships, and private sector investment via PPP models. Oversight will be provided by a District Coordination Committee chaired by the Deputy Commissioner, ensuring alignment with provincial goals and active stakeholder engagement. This structured approach ensures the plan's transition from vision to actionable, accountable outcomes.

STRATEGIC DEVELOPMENT PLAN FOR

HALA TOWN

1. THE PROJECT OVERVIEW

Sindh is the most urbanized province of Pakistan, with 53.7% of its population residing in urban areas as per the 2023 Census. Despite this high rate of urbanization, the province's secondary and district headquarter (DHQ) cities have historically received inadequate attention in terms of structured planning and coordinated public investment. Infrastructure development has often been fragmented and ad hoc, resulting in inefficient service delivery, unmanaged growth, and limited opportunities for balanced regional development.

As a consequence, many secondary cities have not been able to function as true "engines of economic growth." Their inability to attract investment and provide adequate infrastructure and social facilities has reinforced rural poverty in surrounding hinterlands, where the poverty headcount ratio remains nearly double that of declared urban areas.

Recognizing these challenges, the Government of Sindh established the Directorate of Urban, Regional Policy & Strategic Planning (DURP&SP) under the Planning & Development Department. The Directorate provides technical support in policy formulation, master planning, and project implementation aimed at revitalizing Sindh's urban sector and enhancing the role of secondary cities in regional development.

1.1 Objective and mandate of DURP&SP

The core objective of the Directorate is to provide technical support to the Planning & Development Department, Government of Sindh on urban policies, plans, programs, and schemes related to sustainable urban development. The Directorate's focus spans a wide range of urban sectors, including:[1]

- Strategic and Spatial Urban Planning
- Development Regulation and Control
- Economic Regeneration and Investment
- Data and Information Management
- Urban Transport and Mass Transit
- Water Supply and Sanitation
- Municipal Finance and Urban Governance
- Housing and Katchi Abadis

The mandate and scope of the Directorate are twofold:

1. Establishing a province-wide urban development planning process through the preparation of policies, plans, and studies across short-, medium-, and long-term horizons.
2. Supporting the implementation of development projects in line with approved policies and plans, addressing the needs of the urban population, managing migration pressures, and decentralizing economic activities to reduce the burden on already congested metropolitan areas.

Specific functions of the Directorate include:

- Providing guidance and technical support on urban policy and planning.
- Facilitating economic regeneration, investment planning, and municipal governance reforms.

[1] Urban Policy & Planning – urbandirectorate.gos.pk

- Establishing urban information systems (GIS, cadastral surveys, and databases).
- Compiling and managing urban data to support evidence-based policymaking.
- Preparing development/master plans, surveys, and sectoral studies.
- Coordinating with provincial departments, local administrations, and development partners on planning issues.
- Developing and updating the policy framework targeting sustainable urban growth in Sindh.

To date, the Directorate has completed 17 Development Master Plans for DHQ cities, including Sukkur, Larkana, Sanghar, Mirpurkhas, Umerkot, Thatta, Badin, Dadu, Jamshoro, and others.

1.2 Goals and Objectives of the Development Master Plan Project

Building on this institutional foundation, the Government of Sindh initiated the preparation of Development Master Plans for 12 additional secondary cities. These have been grouped into three geographic packages to facilitate integrated regional planning:

- **Package 1:** Khairpur, Ghotki, Mirpur Mathelo, Rohri
- **Package 2:** Shikarpur, Kandkot, Jacobabad, Kambar
- **Package 3:** Kotri, Hala, Tando Adam, Moro

Package 3 has been awarded to EA Consulting Pvt. Ltd. The primary goal is to create comprehensive, 20-year master plans that will transform these cities into sustainable and economically vibrant urban centers.

The proposed Development Master Plans of selected major secondary cities of Sindh would focus on the following activities:

- Review of Past Trends, Development Strategies and Prevalent Conditions
- Preparation of Digital Base Maps
- SWOT Analysis
- Carving out a Vision for Future
- Preparation of the Development Plan focusing on:
    - Long Term Development Plan
    - Growth Scenarios
    - Short Term Action Plan for Priority Infrastructure Development
    - Development of an Immediate Action Plan for the Core Urban Area
    - Economic Development Plan
    - Climate Change, Resilience & Adaptability Plans
    - Disaster Management Plan

- Sustainable Development Goals SDGs Implementation Plan
- Implementation Strategy
- Dissemination – Development Master Plan

This report presents the Strategic Development Plan for Hala City, outlining sector-wise assessments, growth strategies, and implementation mechanisms designed to guide the city's transformation into a sustainable and resilient urban center by 2045.

2. AN OVERVIEW OF MATIARI AND ITS ENVIRONMENTS

2.1 Matiari District at a Glance

Matiari District, recognized for its agricultural dominance and cultural heritage, presents a complex mix of development and challenges. Since its emergence as an independent district in 2005, Matiari has capitalized on its strategic location, bordered by districts Sanghar, Jamshoro, Shaheed Benazirabad, Hyderabad, and Tando Allahyar. Home to approximately 849,383 people as per 2023 census, the district has experienced an average growth rate of 1.65%. Agricultural forms the backbone of its economy, supported by fertile lands irrigated by the Rohri Canal and the Indus River. The district is known for its diverse agricultural output, including essential Kharif and Rabi crops, and robust fruit orchards. Additionally, Matiari supports a varied livestock population, further enriching its agricultural sector.

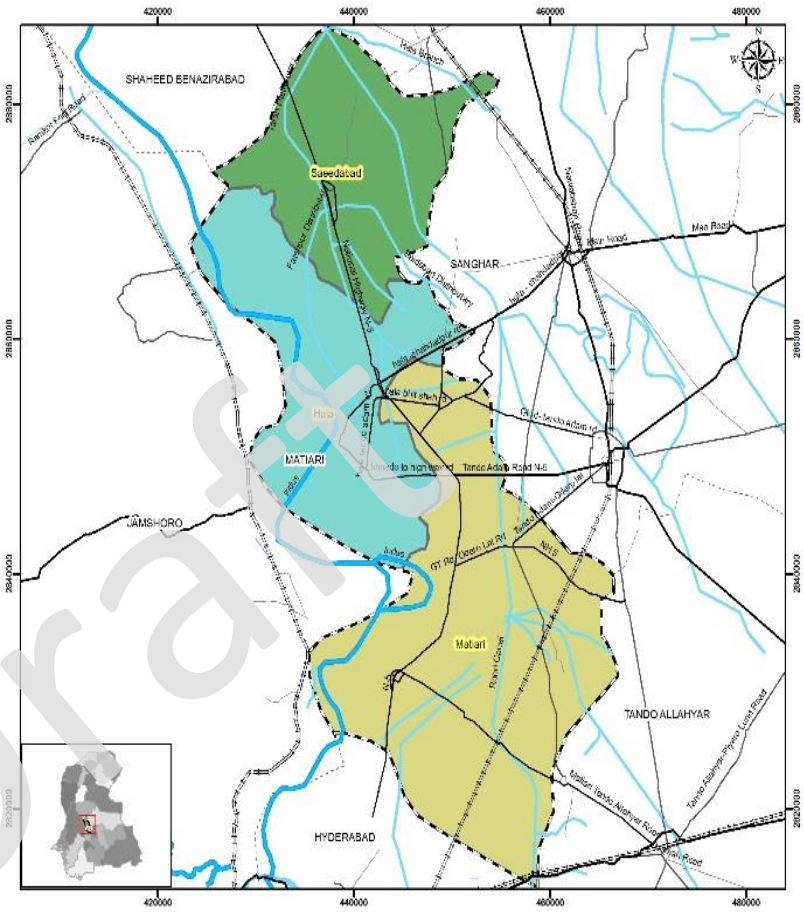


Figure 2-1: Tehsil Map of Matiari

The transport infrastructure, marked by the significant National Highway and critical railway links such as Tando Adam Junction and Odero Lal station, boosts Matiari's connectivity, fostering economic growth and accessibility.[2]

2.1.1 Geographical Location and Area

District Matiari, positioned in a strategically significant area of Sindh, Pakistan, is geographically located between longitudes 68°14'8" to 68°14'40" East and latitudes 25°26'20" to 26°5'43" North. This distinct positioning places the district in a region that is pivotal both for its agricultural potential and its connectivity to surrounding areas.

[2] PESA – A Profile of Matiari Sindh

Surrounded by key districts, Matiari Shares its borders with Sanghar to the east, providing access to the agricultural heartlands of the province. To the west, it is bordered by Jamshoro, which is known for its industrial and educational significance. The northern boundary is shared with Shaheed Banazirabad, a district recognized for its historical and cultural importance. Finally, the southern boundaries are adjacent to Hyderabad and Tando Allahyar, district that are key to Sindh's economic and cultural landscape.

2.1.2 Topography and Geology

Dargah of Pir Sayed Sakhi Hashim Shah Badshah

District Matiari, nestled in the fertile Indus basin, presents a topographical landscape dominated by expensive, flat plains, making it exceptionally conducive to agriculture. The district's geology is significantly influenced by the Indus River, which flows along its western border, depositing rich silt and sandy loam along its banks. These riverine deposits contribute to the district's soil profile, characterized predominantly by loamy textures – a blend of sand, silt, and a smaller proportion of clay. This unique soil composition, enriched by alluvial deposits, endows the district with extraordinarily fertile lands, ideal for a diverse range of agricultural activities. With minimal barren land, most of Matiari's terrain is arable and actively cultivated, underscoring the district's reputation as a thriving agricultural landscape but also forms the backbone of its economy, supporting the livelihoods of a significant portion of its population. Consequently, any developmental initiatives in Matiari, especially those concerning land use, water management, and agricultural planning, must take into account these intrinsic environmental characteristics, ensuring sustainable and productive utilization of this rich natural endowment

2.1.3 Climate

Matiari District, situated in the Sindh province of Pakistan, is characterized by a distinct subtropical desert climate, classified under the Koppen BWh category. This climatic zone is marked by hot and arid summers, with average temperatures typically around 34°C (93°F) annually, but often soaring above 40°C (104°F) during the peak months of May and June. The area receives limited rainfall, averaging approximately 17 millimeters (0.66 inches) annually, predominantly during the monsoon months of July and August. Clear skies and abundant sunshine are a common feature throughout the year, further accentuating the arid nature of the district.

Contrastingly, the winters in Matiari are relatively mild. January, the coldest month, sees average temperatures hovering around 17°C (63°F), with nighttime lows occasionally dipping to 10°C (50°F). Winters are generally dry, with only sporadic light showers, contributing to the overall arid conditions of the region. The low humidity levels prevalent throughout the year, particularly in summer, add to the dry and scorching feel of the climate.[3]

[3] Matiari Annual Weather Averages - Sindh, PK (worldweatheronline.com)

2.1.4 Ethnicity, Culture and Politics

District Matiari, one of the oldest territories in Sindh, Pakistan, is a melting pot of diverse ethnicities and rich cultural traditions. The district is renowned for its profound historical and spiritual significance, particularly highlighted by the presence of the Dargah of Pir Sayed Sakhi Hashim Shah Badshah in Matiari. This sacred site attracts visitors and devotees, reflecting the deep-rooted spiritual heritage of the area. Matiari is also famous for its unique contributions to the culinary and textile traditions of Sindh. The district's ice cream is well-known, offering a delightful treat to residents and visitors alike. Additionally, Matiari's Ajrak, a traditional Sindhi dress, is celebrated for its intricate designs and cultural significance, symbolizing the rich textile heritage of the region.[4]

The Bhit Shah Culture centre, located in the district, stands as a national emblem of cultural and Sufi traditions. This centre includes:

- An Open-Air Auditorium: A venue for cultural programs, showcasing the vibrant performing arts of the region.
- A Museum: Dedicated to the Soormis of Shah Abdul Latif Bhittai, it preserves and exhibits the rich history and artistic expressions related to the legendary Sufi poet.
- Shah Abdul Latif Bhittai Research cell: A hub for scholarly research and study of Sufism and Shah Abdul Latif Bhittai's teachings.
- An Excellence Center Shah jo Bagh (Garden): A serene space that reflects the aesthetic and spiritual values of the area.[5]

Matiari's ethnic, cultural, and political landscape is a vivid representation of Sindh's historical depth, spiritual diversity, and artistic richness. The district's cultural heritage, deeply interwoven with Sufism and traditional arts, plays a significant role in preserving and promoting the unique identity of the region. This cultural vibrancy not only defines the social fabric of Matiari but also contributes to its political and economic dynamics, making it an essential part of Sindh's overall cultural and historical narrative.

2.1.5 Historical / Famous Places

Matiari, a district steeped in historical significance and cultural heritage, is home to several notable landmarks and sites of historical importance. These places not only attract thousands of visitors from across the country but also serve as a testament to the rich history and spiritual legacy of the region. Here are some of the key historical and famous places in Matiari:

Tomb of Shah Abdul Latif Bhittai

- **Shrine of Shah Abdul Latif Bhittai**
- **Jamia Masjid Matiari**
- **Shrine of Hazrat Makhdoom Sarwar Nooh**

[4] https://wikivividly.com/wiki/Matiari

[5] http://sindhculture.gov.pk/index.php/component/content/article/2-uncategorised/48-bhitshah-culture-center

2.1.6 Administrative Set-up

District Matiari, with its intricate administrative setup, is segmented into several divisions, including talukas and mouzas, each serving as an essential unit for local governance and administration. This organizational structure plays a pivotal role in managing the diverse needs of the region.

Jamia Masjid Matiari

The district was created in 2005 out of Hyderabad District. District Matiari has is district headquarters in Matiari city. This district has three talukas, named: Matiari, Hala and Saeedabad. At the heart of Matiari's administrative framework lies the district itself, which encompasses a total of 113 mouzas. These are further divided into 93 rural mouzas, emphasizing the district's predominantly rural character. Additionally, there are 5 urban mouzas, 6 partly urban mouzas, and 1 un-populated mouza, reflecting the varied administrative landscape that accommodates both urban and rural populations, as well as areas earmarked for future development or conservation.

Hala Taluka, a significant subdivision within the district, comprises 38 mouzas. Out of these, 25 are classified as rural, highlighted the taluka's rural dominance. It also includes 3 urban and 3 partly urban mouzas, indicating a blend of urban and rural communities within its administrative boundaries.

Matiari Taluka, another key division, consists of 46 mouzas. Dominated by rural settings, it has 41 rural mouzas, along with 1 urban and 3 partly urban mouzas. This division suggests a focus on catering to a predominantly rural demographic while also addressing the needs of its urban areas.

Lastly, Saeedabad Taluka includes 29 mouzas, with a major portion being rural (27 mouzas). This taluka also features 1 urban and 1 un-populated mouza, the latter indicating areas that are currently uninhabited but may hold potential for future development or are designated as conservation areas.

2.1.7 Major Linkages

Matiari District, with its strategic location in the Sindh province of Pakistan, boasts a well-established network of transport and communication linkages, primarily through roads and railways. This network plays a crucial role in the district's economic development and social integration.

National Highway: The district is traversed by the National Highway, a major arterial road that connects Karachi and Peshawar. This Highway is vital for trade and travel, linking Matiari to major cities and regions across Pakistan.

Railways: Matiari is integrated into the national railway network through the Karachi railway lines via the Karachi-Lahore Lane. Historic railway stations like Tando Adam Junction and Odero Lal station, among the oldest in Pakistan, are part of this network, contributing to its rich transportation heritage.

The road network in Matiari is more than just a means of transportation; it serves as a catalyst for economic growth and social change. Spanning 395 kilometers of good quality roads within an area of 1,417 square kilometers.

2.1.8 Demography

The demographic profile of District Matiari, covering 1,417 square kilometers, is a testament to its dynamic growth and diverse population. As per the 2023 census, the district's population reached 849,383, a marked increase from 770,040 recorded in 2017. This change signifies an average annual growth rate of 1.65%. The sex ratio in Matiari stands at 106.4, suggesting a marginally higher male population compared to females. The population density is calculated at 543.43 individuals per square kilometer, portraying a moderately populated area with a well-balanced urban-rural distribution. Urban residents constitute about 23.72% of the population, underlining the district's predominantly rural nature alongside a notable urban demographic. The average household size in the district is 1.65, reflective of its strong family-oriented community ethos. Projecting into the future, by the year 2045, Matiari's population is expected to surge to approximately 1,217,492, necessitating around 229,715 housing units to accommodate this significant growth.

Table 2-1 Demographic Statistics: District Matiari

Area		Matiari District
Census 1998	Population	494,244
	Aver. Growth Rate	0.71%
	Aver. HH Size	5.7
Census 2017	Population	770,040
	Aver. Growth Rate	2.85
	Aver. HH Size	5.37
	Housing Units	142,256
Census 2023	Population	849,383
	Aver. Growth Rate	1.65
	Aver. HH Size	5.3
	Housing Units	158,559
Population Projection in 2025	Population Projection	877,644
	Housing Units	165,593

Source: Census 2023

2.2 Hala City

2.2.1 History

Hala, a city and taluka of the Matiari district in Sindh, Pakistan, boasts a rich tapestry of history and cultural significance. Its journey from being a part of the Hyderabad District in 1848 to becoming an integral component of the Matiari District in 2005, marks its evolving administrative and political identity. Situated approximately 62 kilometers from Hyderabad, Hala is strategically located on the N-5 National highway of

Pakistan. While it once featured on the Tando Adam- Mehrabpur Railway Line, this line has since been abandoned by Pakistan Railways.

Hala is celebrated throughout the subcontinent for its distinctive arts and crafts. It is renowned for its exquisite glazed colored pottery known as 'Kaashi', intricate woodwork ('Jandi'), vibrant cloth printing, woven cloth ('Sussi'), and khaddar made from handmade khaddi. These traditional crafts not only reflect the city's rich artistic heritage but also contribute significantly to its cultural and economic vibrancy.

In the realm of spirituality, Hala has been a prominent center of the Suhrawardi sect of Sufism since the 16th century. The city is home to the mausoleum of Makhdum Nuh, a revered Suhrwardi Pir, who passed away circa 1592. This mausoleum is a focal point for pilgrims and followers of Sufism, underlining Hala's spiritual significance in the region. Additionally, Hala has been the birthplace of renowned scholars and politicians like Makhdoom Muhammad Zaman Talibul Moula and his son Makhdoom Muhammad Amin Faheem, further accentuating its importance in Sindh's socio-political landscape.

Nearby, at a distance of about 5 km from Hala City, lies Bhitshah Town, known for the mausoleum of the famous Sufi poet Hazrat Shah Abdul Latif Bhittai. Bhitshah Town serves as a sub-office of the Taluka Municipal Administration Hala and is another testament to the area's deep-rooted Sufi traditions.

2.2.2 Geography

Hala Town, a prominent urban center within the Matiari district of Sindh, Pakistan, is geographically situated at approximately 25°48'50.07" North latitude and 68°25'29.79" East longitude. This specific geographic positioning places Hala in a region characterized by the distinctive landscape and climatic conditions of the lower Indus valley.

Being located in this part of Sindh, Hala experiences a climate and environment typical of the Indus River plains. The town's proximity to the Indus River plays a significant role in its geographical and ecological characteristics. The region generally features flat, land, which is conducive to agriculture, a primary occupation in the area.

Hala's latitude and longitude indicate that it lies within a zone that experiences a hot and arid climate, with significant variations in temperature between seasons. This geographical setting not only influences Hala's climate and natural environment but also impacts the lifestyle and economic activities of its inhabitants. The fertile plains support a variety of crops, making agriculture a backbone of the local economy. Additionally, the town's location has historically made it a center for trade and cultural exchange, as evidenced by its rich heritage in arts and crafts.

2.2.3 Demography

According to the 1998 census, the population of Hala MC was 40,377. By 2017 it grew to 65,780, marking a significant increase over nearly two decades. By 2023, it grew to 71,094, the projected population for 2025, based on a 1.31% annual growth rate, is estimated at 88,463, with a corresponding need for 16,094 housing units. The population for Hala Old TC was recorded as 13,030 in 2017. By 2023, it grew to 13,992, at the growth rate of 1.20%, the population is projected to increase to 15,509 by 2025, requiring about 2,683 housing.

Combined Population: The combined population of Hala MC and Hala Old TC was 85,086 in 2023. The projected combined population for 2025 is estimated to be 88,463, with an anticipated need for 15,921 housing units.

Table 2-2: Past Population Growth in Hala

Area		Matiari District	Hala Taluka	Hala MC	Old Hala TC	Total Population of Hala MC and Old Hala TC
Census 1998	Population	494,244	207,574	40,377	-	-
	Aver. Growth Rate	-	-	3.14	-	-
	Aver. HH Size	-	-	6.10	-	-
	Housing Units	-	-	-	-	-
Census 2017	Population	770,04	262,639	65,780	13,030,	78,810
	Aver. Growth Rate	2.85	2.57	2.6	2.6	-
	Aver. HH Size	5.37	5.77	5.53	5.73	-
	Housing Units	142,256	44,776	11,629	2,219	13,848
Census 2023	Population	849,383	286,155	71,094	13,992	85,086
	Aver. Growth Rate	1.65	1.44	1.31	1.20	-
	Aver. HH Size	5.3	5.4	5.44	5.28	-
	Housing Units	158,559	52,849	13,069	2,650	15,719
Population Projection in 2025 (Current Year)	Population Projection	877,644	294,456	72,954	15,509	88,463
	Housing Unit Projection		54,529	13,411	2,683	16,094

Source: Census 1998, 2017, 2023 and Consultant's projections

- **Future Projections**

In 1998, the population of Hala MC was recorded at 40,377, which grew to 71,094 by the 2023 Census. This trend reflects an average annual growth rate of 1.31%. The average household size in Hala MC is 5.44, with 13,069 housing units noted in 2023. Projecting these trends forward, the population in Hala MC is estimated to increase to 72,954 by 2025, necessitating around around 13,411 housing units. Looking further ahead, by 2045, the population is projected to reach approximately 114,652 with an anticipated need for 21,076 housing units. This substantial increase underscores the need for expanded housing and infrastructure to accommodate the growing population.

Although there was no recorded population for Hala Old TC in 1998, it had grown to 13,030 by 2017. It had grown to 13,992 by 2023. With the same growth rate of 1.20%, its population is expected to increase to 15,509 by 2025, requiring about 2,683 housing units. By 2045, the population is anticipated to grow to around 43,400, with the need for approximately 7,509 housing units. This projection indicates a consistent upward trend in population, paralleling the need for increased housing and infrastructure development.

Combining the populations of Hala MC and Hala old TC, the total population in 2023 was 85,086. This combined figure is expected to grow to 158,052 by 2045, necessitating a total of 28,584 housing units.

Table 2-3: Future projections for MC Hala and TC Hala

Area	Census 2023				Population Projection in 2025		2030		2035		2040		2045	
	Population	Aver. Growth Rate	Aver. HH Size	Housing Units	Population Projection	Housing Units Projection	Est: Pop.	HUs EST:	Est: Pop.	HUs EST	Est: Pop.	HUs EST:	Est: Pop.	HUs EST
Matiari District	849,383	1.65	5.3	158,559	877,644	165,593	952,479	179,713	1,033,694	195,037	1,121,835	211,667	1,217,492	229,715
Hala Taluka	286,155	1.44	5.4	52,849	294,456	54,529	316,276	58,570	339,713	62,910	364,887	67,572	485,672	89,939
Hala MC	71,094	1.31	5.44	13,069	72,954	13,411	77,821	14,305	83,013	15,260	88,551	16,278	114,652	21,076
Old Hala TC	13,992	1.20	5.28	2,650	15,509	2,683	20,059	3,470	25,944	4,489	33,555	5,805	43,400	7,509
Total Population of MC AND TC	**85,086**	-	-	**15,719**	**88,463**	**16,094**	**97,880**	**17,776**	**108,957**	**19,748**	**122,106**	**22,083**	**158,052**	**28,584**

2.3 Urban Morphology

2.3.1 Evolution and Expansion of Hala Town: A Dynamic Urban Landscape

Hala Town has experienced gradual but distinct spatial expansion over the years, influenced primarily by its strategic location, transport linkages, and growing population. The morphology of the settlement reflects a combination of traditional core areas and emerging peripheral growth corridors.

2.3.2 Southward Expansion: A Gateway to Connectivity

Hala town's southward expansion is evident along the Hala Bypass and the National Highway N-5. This southward thrust reflects the town's strategic positioning towards accessible transportation routes and its integration into the broader regional economy. The proximity to major highways has facilitated trade and commerce, attracting businesses and industries to the region.

2.3.3 Eastward Growth: Nurturing Infrastructure and Services

Hala town's eastward expansion is exemplified by the development along the Hala Bypass Link Road. This extension signifies the town's capacity to expand its infrastructure and services, catering to the needs of its growing population. The eastward expansion has led to the establishment of new residential colonies, educational institutions, and healthcare facilities, enhancing the town's livability and quality of life.

2.3.4 Northward Progress: Embracing Regional Accessibility and Economic Opportunities

Northward expansion, parallel to the National Highway N-5, is a testament to Hala town's strategic positioning for regional accessibility and potential economic activities. This northward growth has opened up new avenues for commercial development and industrialization, further bolstering the town's economic vitality.

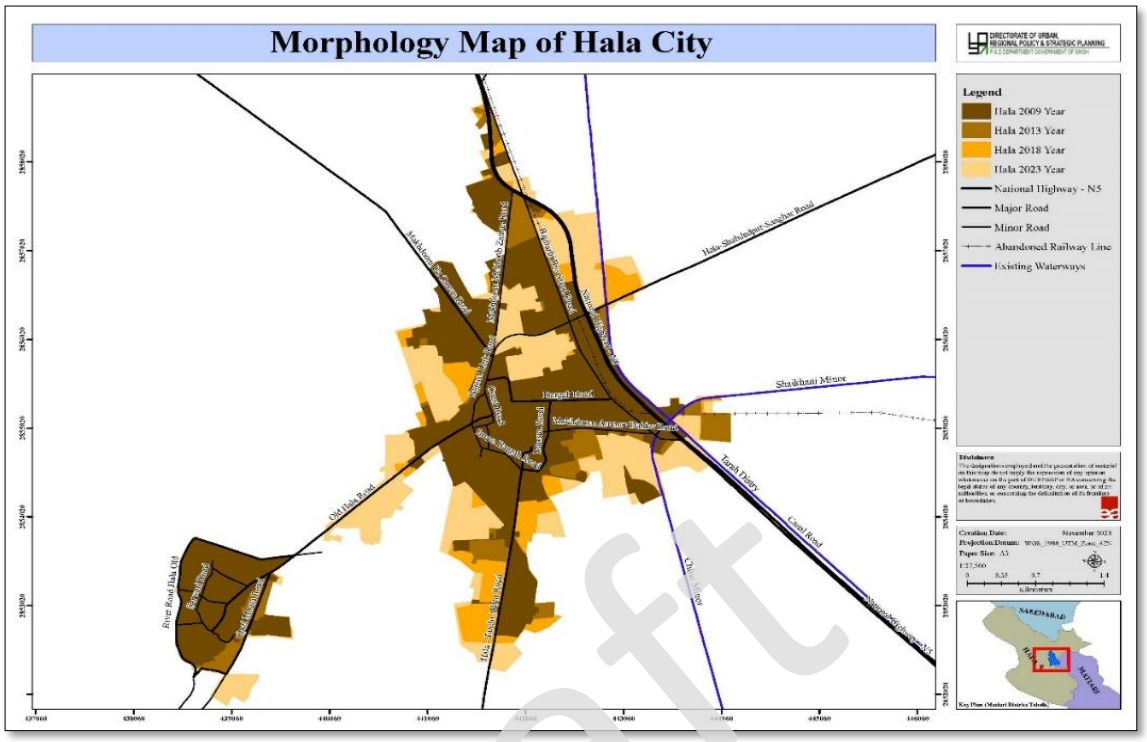


Figure 2-2: Historical Morphology Map of Hala Town

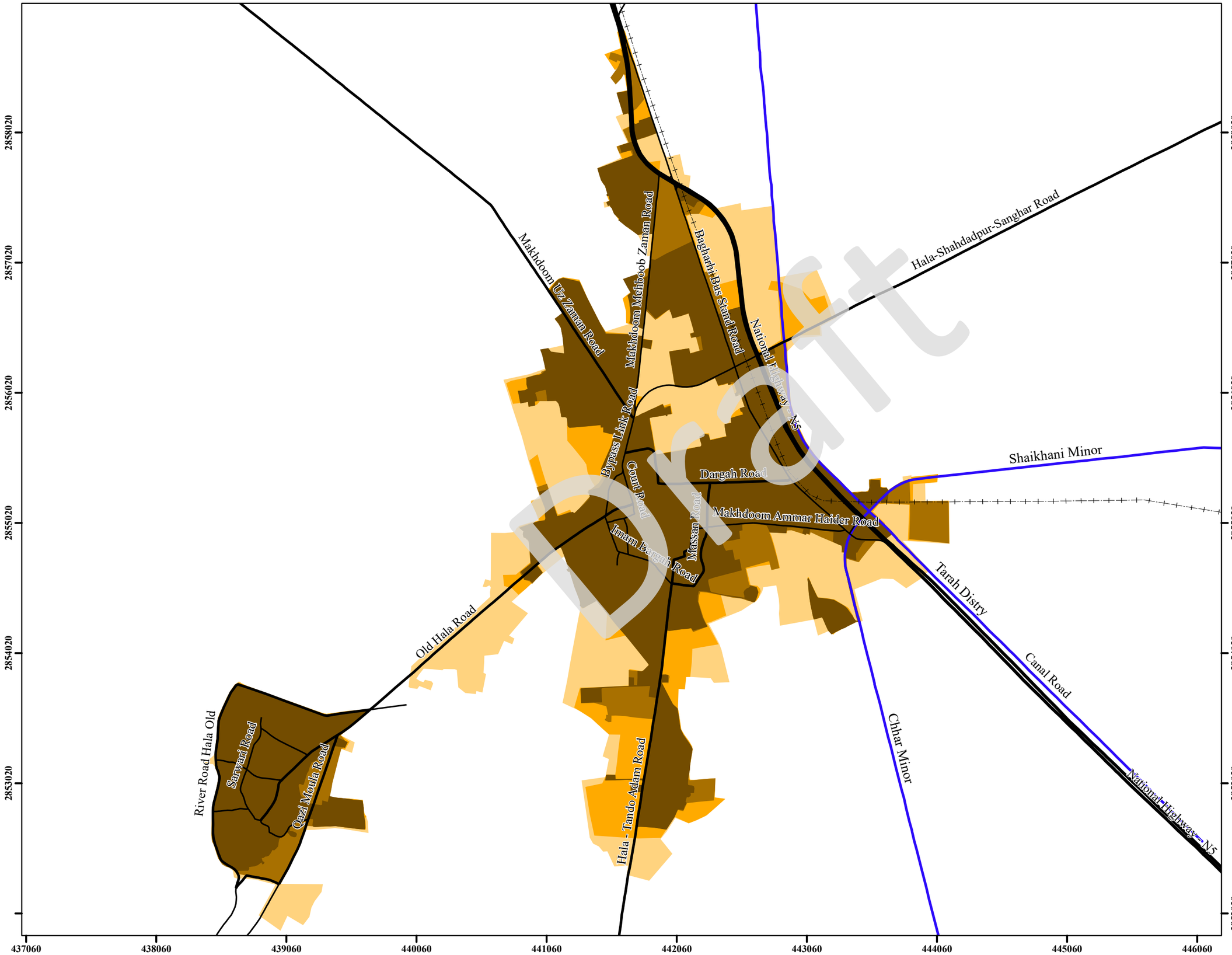
2.4 Land Use and Spatial Analysis

The land use pattern of Hala indicates a predominantly agrarian character, with agriculture occupying nearly half of the total municipal area (46.4%). Residential use accounts for 35.6%, primarily concentrated in medium- and high-density settlements, while low-density neighborhoods remain limited. Commercial activity (4.4%) is mostly in the form of ribbon development along major roads, with no structured commercial hubs. Industrial land is under 1%, reflecting limited diversification of the economic base. Amenities collectively cover 5.3%, though health (0.3%) and utilities (0.3%) are critically underprovided. Recreational space is negligible (<0.1%), well below planning standards, undermining livability. Transport land use constitutes 5.2%, dominated by road networks, with minimal provision for public transport facilities. Overall, the land use mix reflects compact urban cores, ribbon expansion, and acute deficits in recreation, utilities, and industrial zones, highlighting the need for zoning controls and balanced allocation to support sustainable growth.

The detailed land use classification for Hala New MC and Old Hala TC, covering 2,362.73 acres, is presented in **Table 2.4**, showing nine broad categories: Residential, Commercial, Amenities, Recreational, Industrial, Transportation, Agriculture, Water Bodies, and Special Use (Vacant Land).

Morphology Map of Hala City

DIRECTORATE OF URBAN, REGIONAL POLICY & STRATEGIC PLANNING
P & D DEPARTMENT GOVERNMENT OF SINDH



Legend

- Hala 2009 Year
- Hala 2013 Year
- Hala 2018 Year
- Hala 2023 Year
- National Highway - N5
- Major Road
- Minor Road
- Abandoned Railway Line
- Existing Waterways

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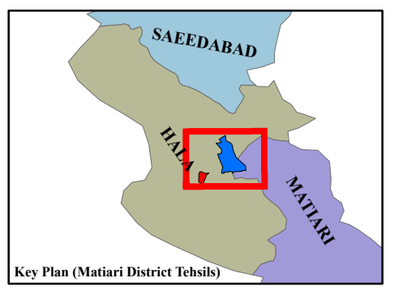


Key Plan (Matiari District Tehsils)

Table 2-4: Land use classification

Land use Classification and Percentages					
Hala New MC and Old Hala TC					
S No	Land use Classification			Area (Acres)	%
1	Residential	Residential	Low Density Residential	34.45	1.46
			Medium Density Residential	298.60	12.64
			High Density Residential	297.98	12.61
			Reserved for Residential Purpose	94.75	4.01
			Existing Housing Schemes	114.84	4.86
		Sub Total		840.62	35.58
2	Commercial	Commercial	Low Density Commercial	103.98	4.40
			Medium Density Commercial	0.75	0.03
		Sub Total		104.73	4.43
3	Amenities	Institutional	Government/Public Administration	23.01	0.97
			Health And Welfare	7.64	0.32
			Education	40.05	1.69
			Private Office/Institution	0.08	0.00
		Sub Total - A		70.78	3.00
		Utilities And Municipal Service Facilities	Water Supply	0.32	0.01
			Sewerage	2.05	0.09
			Solid Waste Disposal	2.77	0.12
			Electricity	1.83	0.08
		Sub Total -B		6.97	0.30
		Religious	Mosque	8.04	0.34
			Imam Bargah	2.62	0.11
			Temple/Mandir	0.04	0.00
			Burial Ground	36.86	1.56
		Sub Total - C		47.55	2.01
		Total of A+B+C		125.30	5.30
4	Recreational	Parks and Playground	Parks and Playgrounds	0.52	0.02
			Auditorium	1.52	0.06
		Sub Total		2.04	0.09
5	Industrial	Industry	Small-Scale Manufacturing/ Light Industry	16.38	0.69
			Warehouse	6.89	0.29
		Sub Total		23.27	0.98
6	Transportation	Transportation	Bus Stop/Adda	0.30	0.01
			Railway	0.41	0.02
			Roads	121.40	5.14
		Sub Total		122.11	5.17
7	Agriculture	Agriculture And Forestry	Agricultural	1093.33	46.27
			Livestock	3.38	0.14
		Sub Total		1096.71	46.42
8	Water Bodies	Water Bodies	Pond	21.98	0.93
9	Special Use	Special Areas	Vacant Land	25.97	1.10
			Total Area of Hala New Mc and Old Hala TC Boundary	2362.73	100.00

Source: Spatial Analysis done by consultants

2.5 Town Scape

The townscape map of Hala City provides a detailed overview of the city's layout divided into eight distinct areas, each with its unique character and blend of residential, commercial, and industrial developments. It's important to note that these divisions are not administrative but serve to understand the existing cityscape.

Area 1:

Area-1 of Hala City epitomizes a unique blend of residential, cultural, and commercial vibrancy. Characterized by a diverse mix of streets and housing, from traditional homes to modern apartments, it caters to various residential needs. The area is beautified with green spaces and parks, offering serene retreats for community interaction and recreation. The presence of Dargah Hazrat Makhdoom Sarwar Noh (R.A) adds a rich cultural and spiritual dimension, attracting visitors and pilgrims. Despite its residential nature, Area-1 thrives commercially, with the bustling Shahi Bazaar and the presence of commercial banks adding to its economic vitality. This fusion of residential comfort, cultural heritage, and commercial activity makes Area-1 a dynamic and integral part of Hala City's urban landscape.

Area 2:

This area is also mostly residential, with a similar mix of streets and green spaces. Area is bifurcated bt the Dargah road and Shaheed abdul rehman road. This area also is connected with N-5 Road. This is the entry point of the road from the major towns at south the hala new town, the activities involve in this area revolves the usage of basic house hold shops, petrol pumps general stores, clinics, schools and park. The basic limit assumed for this area is the tando adam – hala town road and canal road.

Area 3:

The reason behind the new development city particular to this area is just because area is connected with the old city or core urban area additionally talib e maula colony residents as because this society is growing with the particular to their relatives living in this area. The hala town basic starts formulation takes place in area 3 for the basic medical facilities like Dar ul shifa hospital, Raza medical center and Doctor abdul shakoor hospital. The memon sports complex hala is also situated in this area. Old hala road connects with specific region to form up a major two basic mosques in this area Mustafa masjid and jame masjid dar ul uloom.

Area 4:

This area includes the bhacha paro society, cricket ground at Wapda jame e masjid with ice factory along the same connection to the road for moving to the Municipal committee office, Hala city court, Govt. Girls Degree college hala, Taluka HQ hospital Hala, and major known place for animal trading place (Mavaishi Mandi) in this area, for the specific connection to the major roads of the Hala Core urban area for called as the Area-1. Hala Maal market traders place also includes in the area where the traders set the connection with upper region of the area.

Area 5:

Area-5 situates the law enforcement police station Hala new town at Court Road connecting road from the start of the road from the school facility called The Educator Hala Campus. This area starts from the Super madina restaurant to the bus stop at N-5 station for Shalimar bus Stop hala and its West it

ends along the Court City hala. The same area also includes the major facilities for Banks, Schools, and Ayesha Hospital. The area also includes the shops and dealers for scrap dealing facilities.

Area 6:

This area includes the division from the Makhdoom Fazal Silling Station towards the south of the hala new town Dahri Restaurant and ends towards the Faizan e madina N-5, Sarwari Dua Restaurant. This area also includes the major and minor on daily purpose facilities like schools, clinics, Bureau of Statistics Sindh field office and Grid Station hala. At the West of the Area-6 there is the hala cotton factory with PSO petrol pump along the major court road.

Area 7:

The area 7 includes the places where the old town Hala for the Lahooti Palace, Old Hala Police Station, Govt. boys' high school old Hala, and Akund petrol pump station. The area limits itself from the old hala road towards the center of the old hala city center. The area also adds the maternity home, ahmed clinic, THQ old hala and towards the Khandu to National Highway.

Area 8:

The area adds the basic facilities like education, mosques, pakwan centers, groceries shops, includes the housing societies like al Mustafa town. The area also serves as the basic form of govt. schools for boys high and primary schools. This area also have the old town Muhajir graveyard and Qazi cemetery, along the same old town hala road the road connects to the basic health unit facility at the shops for groceries store. The basic area for the area 8 counts for the older town population associates with the old town residents living along with their relatives for a longer past year.

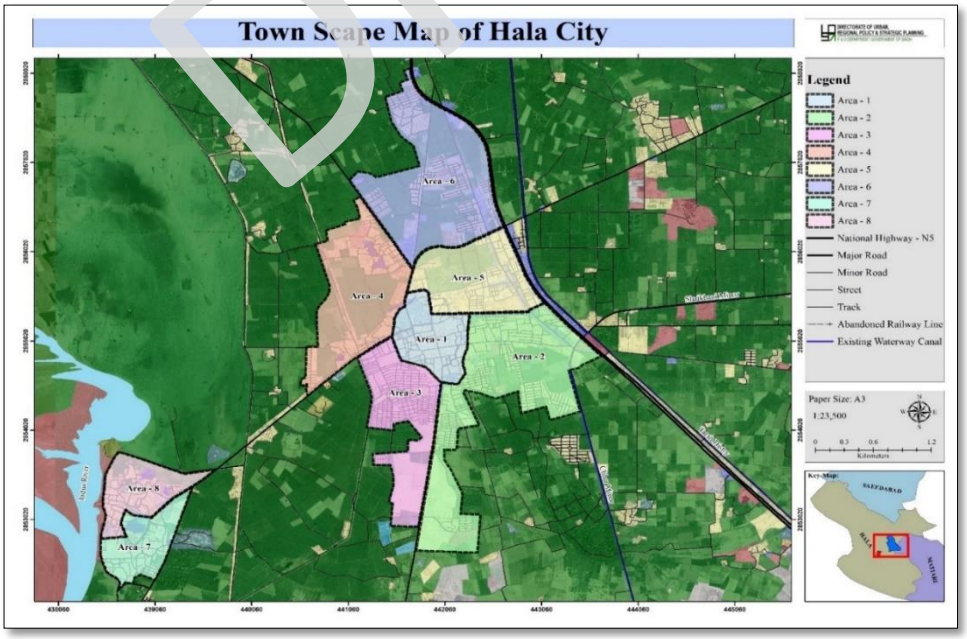


Figure 2-3: Existing Townscape Map of Hala City

3. VISION FORMULATION WORKSHOP

The vision formulation exercise aimed to adopt a pluralistic, stakeholder-led approach to define a shared long-term vision for Hala City, clarify its intended regional role within Sindh, and identify priority development directions for socio-economic uplift and improved livability. A consultative vision formulation workshop was held in Hala on 24 July 2024 to capture stakeholder priorities and translate them into measurable strategic directions for the SDP.

Stakeholder Consultation

3.1 Summation of Vision Formulation

The vision formulation exercise consolidated stakeholder perspectives on Hala's future development, service delivery priorities, economic positioning, and environmental sustainability. At the concluding session, feedback forms were administered using a close-ended questionnaire to quantify perceptions of current services and validate priority interventions.

Key findings are summarized below (to directly inform SDP strategies and project prioritization):

1) The primary goal of the vision formulation exercise was to embrace a pluralistic approach in crafting a shared and collective vision for the future development of Hala Town. This involves positioning Hala Town as a prominent regional hub within Sindh province and fostering the socio-economic advancement of its community.
2) The road infrastructure in Hala Town was mostly rated as average, with a strong consensus on the need for initiating new road construction projects. Participants highlighted a critical need for enhancing local and public transportation facilities, which were considered very important.
3) The water supply system was deemed inadequate by a large majority of the participants, who pointed to the necessity for major upgrades. The condition of the sewerage system was also a significant concern, with many ratings it as average or poor, underlining the need for development in this sector.
4) The creation of new commercial and industrial zones was seen as crucial for boosting Hala Town's economic activities and growth. Job opportunities were generally viewed neutrally or unsatisfactorily, underscoring the urgency for economic development initiatives.
5) Healthcare facilities received mostly average or poor ratings, indicating a pressing need for improvements in medical services. There was a unanimous call for more educational facilities, with a focus on establishing dedicated zones for schools and colleges.
6) Recreational facilities, including parks and sports complexes, were deemed very important by all participants, reflecting a strong desire for better public amenities. Solid waste management was another area where improvements were deemed necessary due to average or poor ratings.
7) Participants universally supported the creation of more green spaces, expressing a strong preference for greener urban environment. Renewable energy initiatives were also favored, showing a keen interest in sustainable energy solutions.

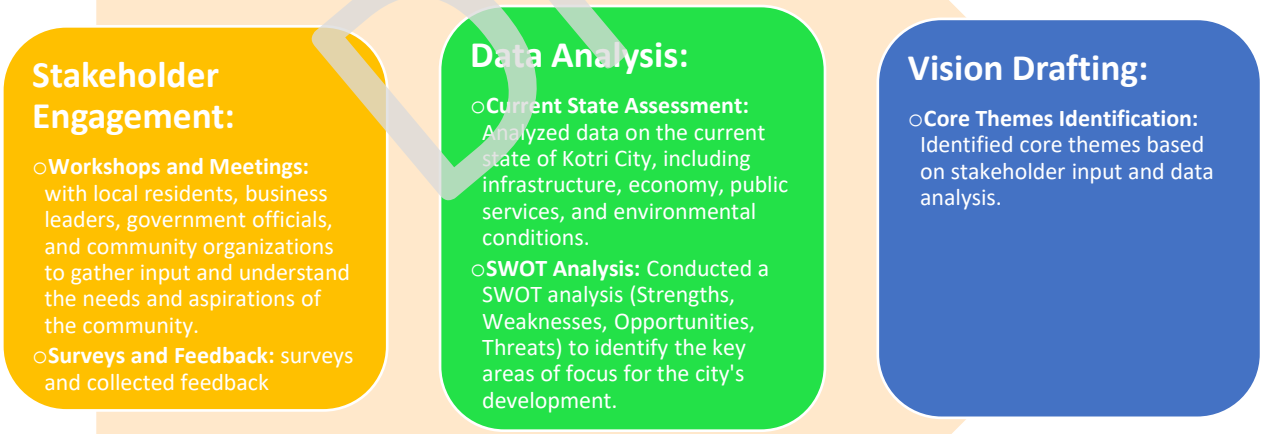
In general, the quality of life in Hala Town was rated as average, with some participants expressing dissatisfaction. The development of a comprehensive master plan received unanimous support, emphasizing the community's commitment to structured and effective urban planning. Active community involvement in developing the master plan was also highlighted as crucial, mirroring the community's desire for engagement in shaping the town's future.

In conclusion, the workshop pinpointed critical areas needing attention, such as infrastructure enhancements, better public services, economic development, and environmental sustainability. These insights will serve as key components in developing a robust master plan aimed at improving the living standards for the residents of Hala Town.

3.2 Hala's Vision Statement

The vision statement is derived from stakeholder inputs and is translated into strategic themes and measurable targets to guide sector strategies, project prioritization, and implementation sequencing under the SDP.

Process of Developing the Vision Statement:



HALA CITY VISION 2045

"The city full filling all the basic needs, such as housing, water supply and sanitation, in clean and sustainable pollution free environment, with education and health for all, along with growth in local and regional economy with increase in employment, incomes and related skills development to emerge as well-planned modern city with peace, security and prosperity like some of the best most liveable cities in the world."

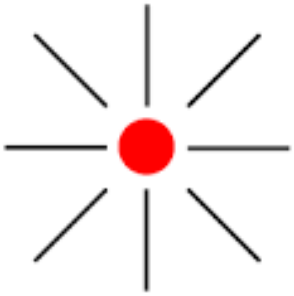
PROPOSED MASTER PLAN FOR

HALA CITY

4. PROPOSED MASTER PLAN OF HALA CITY

4.1 Spatial Pattern

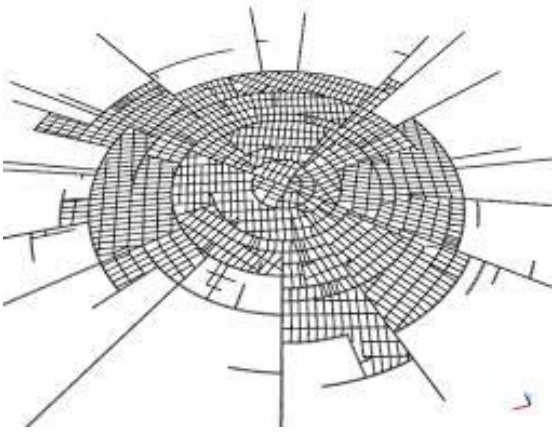
Hala City, located in the Matiari District, has evolved into a prominent center that plays a pivotal role in the socio-economic development of lower Sindh. Historically, the city has grown around its core, leveraging its strategic location on the N-5 National Highway and the proximity to the Indus River. The city's growth is influenced by its role in agriculture, crafts, and trade, connecting rural communities to regional markets.



The spatial growth of Hala follows a pattern characterized by expansion along major transport routes, including the N-5 Highway and other regional roadways. However, this pattern of expansion poses challenges such as potential congestion and strain on existing infrastructure, necessitating careful planning to mitigate these impacts. The city's growth reflects a concentric pattern, radiating outward from its core, which is primarily driven by agricultural, residential, and commercial activities. The spatial form of the city is structured by its historical development as a hub for arts and crafts, agriculture, and trade.

4.2 Basic Urban Form

The existing urban form of Hala City is characterized by a mix of residential, commercial, and agricultural areas that serve the needs of the local population and surrounding rural communities. The city's core remains the focal point for commercial and social activities, with development radiating outward in a concentric pattern.



Key roadways, such as the N-5 Highway, are critical for connectivity, supporting both local commerce and regional integration. The future urban form of Hala is planned to maintain this mixed-use character while ensuring structured expansion to meet the needs of the projected population of 158,052 by 2045. The development approach will ensure that urban growth remains compact, preventing sprawl, while integrating new commercial, residential, and recreational uses.

4.3 Proposed Master Plan

The Proposed Master Plan is structured into three implementation horizons to link spatial proposals with investment sequencing and institutional capacity:

i. Immediate Phase - Immediate Action Plan
ii. Short Term Phase - Priority Projects
iii. Long Term Phase – Strategic Development Plan

The total extent of the area included in the proposed Hala Master Plan is approximately 7,844 acres, with a projected population of 158,052 by 2045. The plan aims to achieve a balanced population density while providing adequate housing, infrastructure, and services, to meet the needs of growing urban population. The spatial structure reinforces the historic core and introduces a radial-ring framework, where existing primary corridors operate as radial connectors and a proposed bypass/ring connection functions as both a mobility improvement and a growth boundary.

Despite taking different aspects in to consideration, the Consultant suggest that the Master Planning should be reviewed every five years to estimate the land use and area requirement according to the growth rate and economic investment.

The Development Master Plan is based on the following components:

a) Determination of Growth Scenarios: The potential growth scenarios for the city and district have been identified based on population growth projections, economic development potential, and recommendations for the most viable spatial growth option for the city. These scenarios consider land requirements for spatial growth, environmental concerns, and economic opportunities. This forms the basis for delimiting development zones for the city and its hinterland, ensuring that the delineated area meets the anticipated spatial needs for the coming 20 years.

b) Long Term Plan: The Long-Term Framework focuses on the development of the city and the larger region over the next 20 years on an ecologically sustainable basis. It addresses urban planning and development, including programs and strategies across infrastructure, economic, and social sectors such as housing, land supply and management, education, health, recreation, water supply, sewerage, storm water drainage, solid waste management, transportation networks, electric power supply, gas supply, firefighting systems, environmental and ecological concerns, and economic development. Specific projects identified in the long-term plan are intended for implementation in the short term.

c) Short Term Action Plan for Priority Infrastructure Investment: Based on the long-term physical and economic development plans, a Short-Term Action Plan has been prepared to identify priority projects in each sector. These include rehabilitation, improvement, and extension of water supply, sewerage, storm water drainage, solid waste management, road infrastructure, housing (including Katchi abadies and slums), education, health, recreation, the central business district, and firefighting systems. The priority projects are aligned with the Sustainable Development Goals (SDGs 2, 3, 4, 6, 7, 8, and 11). Scope, size, and preliminary cost estimates for public sector projects have been worked out for Annual Development Program (ADP) allocations.

d) Preparation of an Immediate Action Plan for the Core Urban Area: An Immediate Action Plan (IAP) has been developed for the core urban area, including detailed design proposals for development and revitalization of key elements such as housing, footpaths, street lighting, street furniture, water supply, wastewater networks, essential garbage collection, horticulture, plantation, and the creation of urban open spaces. Scope, size, and preliminary cost estimates for public sector projects have been drafted for ADP allocations, and sector-wise PC-Is have been prepared.

e) Economic Development Plan: Within the Long-Term Development Plan framework, both long- and short-term economic development plans have been formulated. The focus is on strategies, interventions, and projects that will lead to the economic revitalization of Hala City and the district. The plan emphasizes identifying new avenues for job creation, revenue generation, and the development of Small and Medium Enterprises (SMEs), Special Economic Zones (SEZs), agro-based industries, tourism, recreational activities, and the services sector. Investment plans have been proposed to attract investors, with an emphasis on syncing with the core competencies of the city and district.

   The Economic Development Plan also considers ongoing and proposed projects and the potential for industrial, agricultural, livestock, tourism, and other developments. A detailed framework for the development of primary, secondary, and tertiary industries is included, with strategic actions aimed at boosting the economy and creating employment opportunities.

f) Disaster Management Plan**:** A Comprehensive Disaster Management Plan has been developed based on a detailed study of the environmental setting and natural disaster risks for Hala City and the larger region. This plan includes threat perception, emergency preparedness, coordination between various government agencies, and emergency response, relief, and rehabilitation strategies.

g) Climate Change, Resilience & Adaptability Plan: A Climate Change Resilience and Emergency Contingency Plan has been formulated based on secondary data and consultations with relevant institutions. The plan includes recommendations for the conservation and enhancement of local agriculture, flora, and fauna, focusing on climate change adaptation and resilience.

h) Sustainable Development Goals (SDGs) Implementation Plan**:** SDGs Implementation Plan is prepared to achieve national commitments to the SDGs. The plan analyzes the existing situation of Hala City concerning SDGs such as Zero Hunger (Goal 2), Good Health and Well-Being (Goal 3), Quality Education (Goal 4), Clean Water and Sanitation (Goal 6), Affordable and Clean Energy (Goal 7), Decent Work and Economic Growth (Goal 8), and Sustainable Cities and Communities (Goal 11).

Alternative Land Use Planning Scenarios

Scenario 1: Cultural and Heritage Preservation Scenario

Literature Concept: Place-Based Development & Heritage Urbanism

This scenario emphasizes leveraging Hala's rich cultural history and traditional crafts. The concept aligns with Place-Based Development, which promotes using local cultural assets to foster economic growth and resilience. It also incorporates Heritage Urbanism, focusing on the preservation of cultural and spiritual sites to enhance tourism and community identity.

- **Arts & Crafts Hub**: Establish dedicated zones for Kaashi pottery, woodwork, and traditional textiles, supported by training centers and galleries.
- **Sufi Heritage Tourism Development**: Develop infrastructure around the mausoleum of Makhdum Nuh and nearby Bhitshah Town to enhance spiritual tourism.
- **Green Buffer Zones**: Develop green spaces around cultural zones to act as buffers and enhance environmental quality.

Key Example: The Fes, Halacco revitalization project, which preserved historical crafts and promoted cultural tourism, serves as an inspiration for this scenario.

Strengths: Preserves cultural heritage, boosts tourism, supports local artisans. **Challenges**: Limited space for industrial growth, preservation efforts may slow urban expansion.

Scenario 2: Agricultural and Agro-Industrial Development Scenario

Literature Concept: Agrarian Urbanism & Agro-Ecological Zoning

This scenario integrates Agrarian Urbanism, focusing on maintaining agriculture as a central part of urban life, and Agro-Ecological Zoning to maximize sustainable land use. The scenario seeks to preserve Hala's fertile land while introducing agro-processing industries to add value to local agricultural produce.

- **Agricultural Preservation**: Retain fertile land along the Indus River, designating it as green belts to prevent urban encroachment.
- **Agro-Industrial Zone**: Develop agro-processing industries for cotton, sugarcane, and other crops, supported by improved infrastructure and logistics.
- **Cluster Housing**: Promote rural cluster housing developments to reduce urban sprawl and support agricultural communities.

Key Example: **Peri-Urban Agriculture Zones in Milan, Italy**, which emphasize food security and sustainable agriculture within urban expansion areas.

Strengths: Enhances agricultural productivity, supports employment in agro-based industries. **Challenges**: Limits urban growth potential, economic activities may remain narrow.

Scenario 3: Urban Growth and Regional Connectivity Scenario

Literature Concept: Transit-Oriented Development (TOD) & Regional Development Theory

This scenario is based on **Transit-Oriented Development (TOD)** and **Growth Pole Theory**, promoting regional integration through strategic infrastructure investments. It seeks to enhance Hala's connectivity to larger regional hubs and foster balanced growth.

- **Mixed-Use Urban Core Development**: Develop mid-rise mixed-use zones around the central core to accommodate residential, commercial, and institutional growth.
- **Transit-Oriented Development (TOD)**: Integrate new commercial zones along the N-5 Highway, enhancing connectivity and reducing car dependency.
- **Industrial and Logistics Hub**: Develop an industrial hub near the highway to facilitate regional trade.

Key Example: **Curitiba, Brazil**, known for its TOD and efficient urban planning, which encourages balanced urban expansion.

Strengths: Promotes regional integration, supports diverse economic growth.
Challenges: Risk of losing agricultural land, high infrastructure costs.

4.3.1 Selection of the Optimal Scenario and Refinement

A stakeholder consultation workshop was held on June 26, 2025, at the Assistant Commissioner's office in Hala, chaired by the Assistant Commissioner, with participation from DURP&SP officials, line departments, EA Consulting, and community representatives. Three alternative land use scenarios were presented, and stakeholders unanimously endorsed the agriculture and agro-industrial option as the preferred strategy, with emphasis on incorporating green buffer zones, improved drainage, a new ring road, and rehabilitation of transport and civic facilities. The selected option now forms the basis of the proposed development master plan of Hala City.

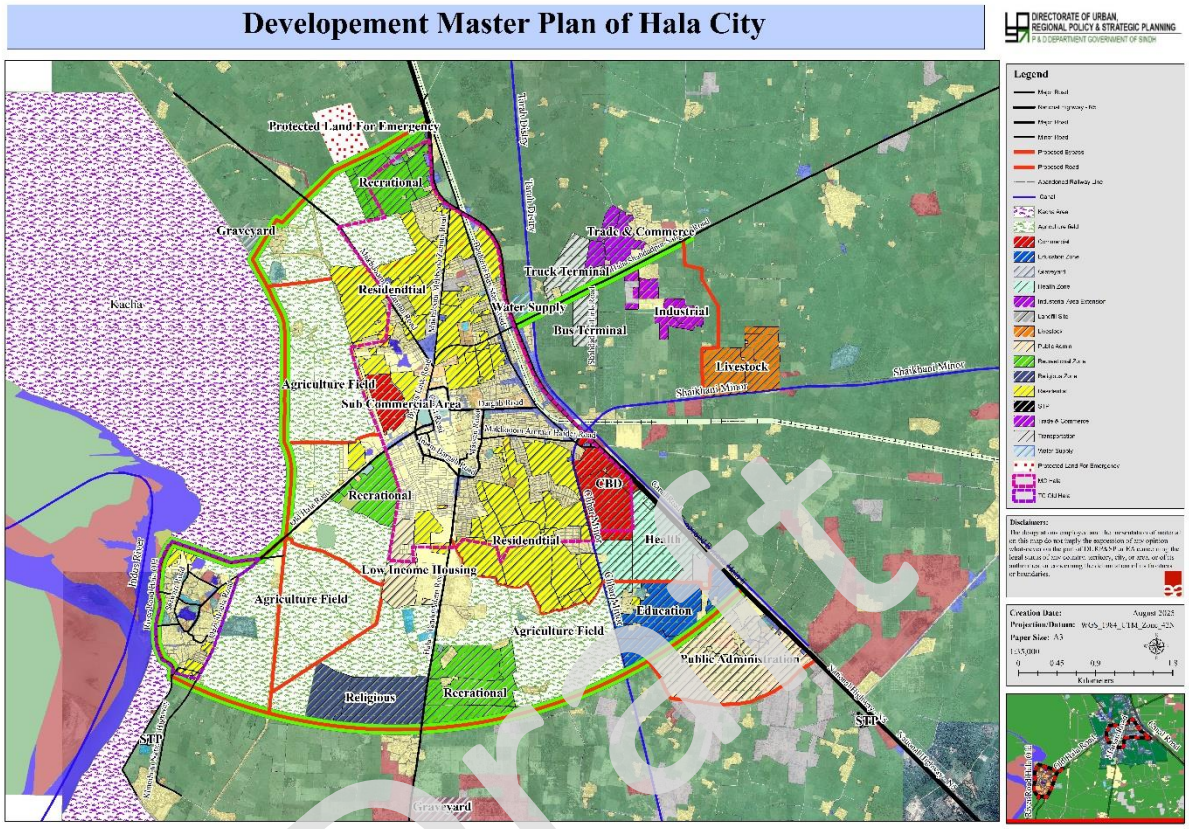


Figure 4-1 Proposed Master Plan of Hala

Developement Master Plan of Hala City

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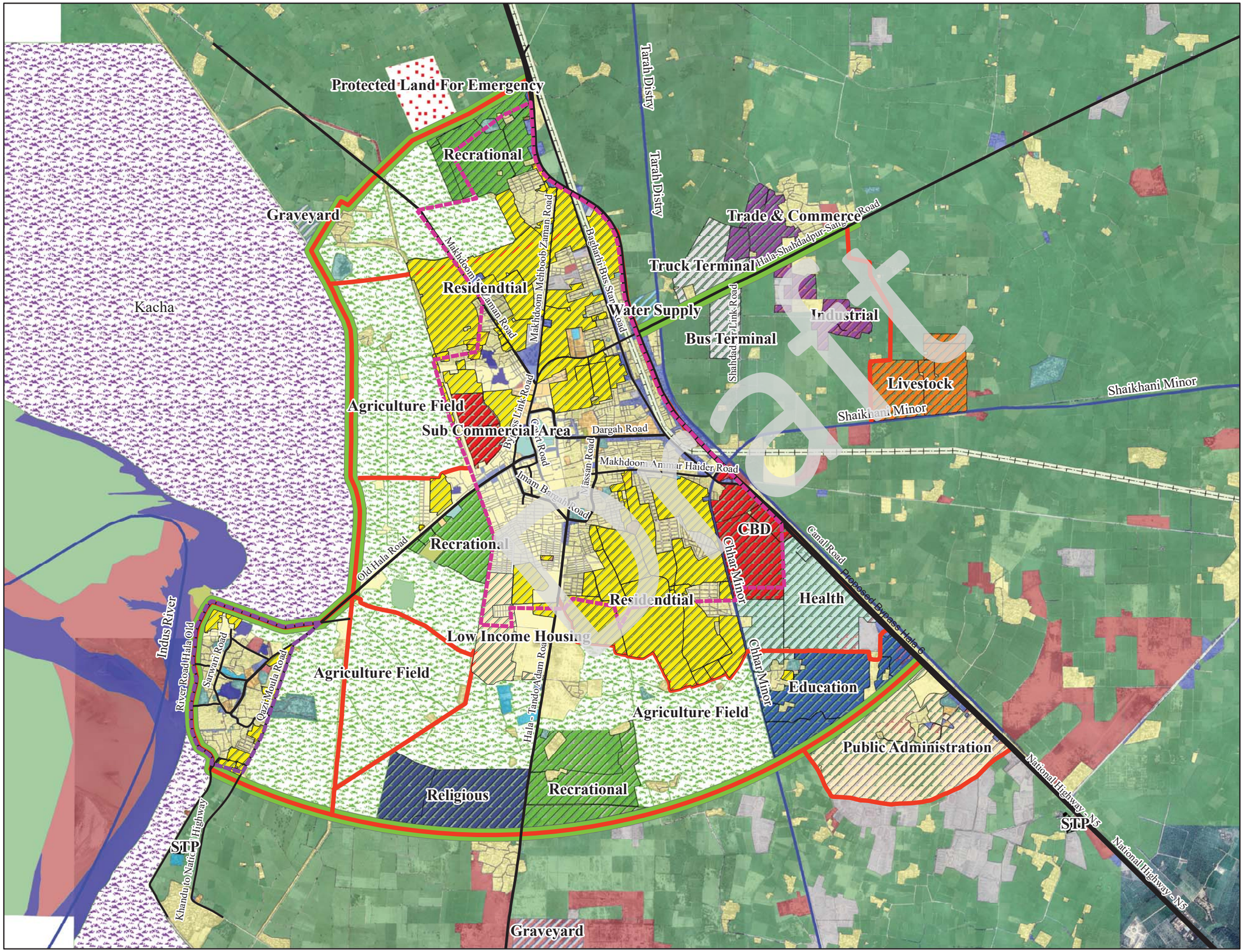

Legend

- Major Road
- National Highway - N5
- Major Road
- Minor Road
- Proposed Bypass
- Proposed Road
- Abandoned Railway Line
- Canal
- Kacha Area
- Agriculture field
- Commercial
- Education Zone
- Graveyard
- Health Zone
- Industerial Area Extension
- Landfill Site
- Livestock
- Public Admin
- Recreational Zone
- Religious Zone
- Residential
- STP
- Trade & Commerce
- Transportation
- Water Supply
- Protected Land For Emergency
- MC Hala
- TC Old Hala

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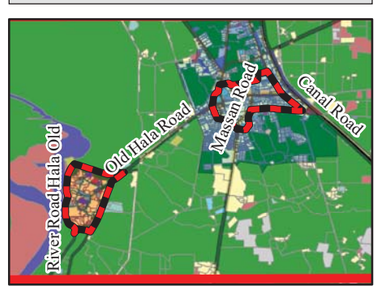

4.3.2 Salient Features of Planning

- As the town is cone-shaped, there is a main CBD (Central Business Districts) with tourism activity concentrated on the western side of the town.
- In addition, sub commercial areas are also identified near main core area of city to reduce the burden on the main CBD along the existing bypass and NH-5 roads.
- Considering wind direction and location of NH-5 with proposed Bypass Road and cottage industries, Trade and Commerce and Warehouses are proposed between Hala-Shahdadpur Road. Moreover, Small industries and technical services activities are also proposed in this zone.
- Two transport hubs are designated; one Bus terminal and one truck terminal along Hala-Shahdadpur Road on Eastern side.
- The areas for graveyards have also been reserved on the far northern and southern sides
- The cattle and poultry areas are also proposed in the eastern direction, accessible from Existing Shaikhani Minor Road, to contain further urban expansion. This location will also serve the population of nearby villages and settlements.
- Large health and educational zones are also suggested along existing bypass and NH-5 road.
- Sports and Cultural Complex is proposed on Old Hala Road. Along the southern bypass, a Grand Park is planned, while a large recreational zone (amusement park) is proposed on the northern bypass. Additional smaller green parks are also proposed within the town.
- The Public Administration is proposed to be located along the existing bypass and NH-5, to serve as a joint administrative hub for both Hala and Bhit Shah in the future.
- Agricultural fields are proposed up to the beginning of the Katcha area, with the majority located on the western and southern sides of the city, as these areas benefit from the existing irrigation network. This approach will help limit housing development and preserve farmland from encroachment by private housing projects.

The salient features of the proposed master plan for Hala emphasize compact and controlled growth while balancing urban expansion with agricultural preservation. By reinforcing the CBD and introducing sub-commercial areas along the bypass and NH-5, the plan distributes commercial pressure and improves accessibility. The allocation of new transport hubs, health, education, and recreational zones enhances service delivery and quality of life. Importantly, the reservation of agricultural fields and buffer zones around the bypass prevents uncontrolled sprawl and secures food-producing land. Together, these features promote sustainable, well-structured urban growth and strengthen Hala's role as a regional hub.

4.3.3 Proposed Western bypass

The proposed western road is not designed as a perfect circular form but follows a modified alignment considering the area available for further development. It begins from the starting point of the existing link road widening and connects to the northern side of the town. The alignment has been deliberately chosen to serve as a growth boundary and limit uncontrolled physical expansion of the town.

The recommendations are to increase the right of way (ROW) to 200 feet, with a continuous green belt/urban forestation of 200 feet on both sides of the proposed western bypass. As the land along this bypass will attract developers, a development control zone should be notified, restricting any form of construction within this strip and allowing only the plantation of native/local tree species

The proposed western bypass is technically feasible and consistent with the master plan's objective of compact growth. However, strict enforcement of buffer zoning (200 ft forestation strip) will be crucial, particularly in the southern stretch where encroachment pressures are high. If implemented effectively, this bypass will not only improve connectivity but also act as a protective green belt, guiding sustainable urban expansion and preserving agricultural land.

4.3.4 New Roads – Regional Connectivity

All proposed new roads are aligned with existing major corridors, ensuring strong transport connectivity with surrounding urban and rural areas. Most of these roads converge toward the core urban area, thereby maintaining the town as the focal point for development along these corridors. Additionally, these new links will serve as vital regional connectors, supporting trade, mobility, and access between Hala and neighboring towns, while reducing travel time and congestion on the N-5.

The proposed road network is consistent with compact growth principles, as it strengthens the town's central role while dispersing traffic through multiple corridors. Integration with the proposed western bypass further ensures that through-traffic is diverted, protecting the town core from congestion.

4.4 Proposed Land Use Zoning

The proposed land use zoning is broadly based on National Reference Manual (NRM) Standards[6]. The NRM has not been revised since decades, thus the Consultant have added new land uses in the prescribed categories, as primary zoning i.e. Level-1. Further, as per the contextual requirement of the local environment of Hala, secondary zoning i.e. Level-2, is also categorized accordingly, again in consideration to the NRM Standards[7]. The proposed land use zoning is shown in the table:

The total area requirement for a fully developed city is approximately 7,844 acres. As shown in the table of proposed land use classification, the percentage of residential and commercial zones are slightly lower, in comparison to the NRM standards. Since Hala exhibits a prevailing trend of medium-density development, it is anticipated that both residential and commercial activities will require less land compared to other towns, allowing for more efficient use of urban space.

Deviations from NRM percentages reflect Hala's compact medium-density trend, the need for stronger green buffers and institutional clustering, and the requirement to protect agricultural land from speculative conversion. Residential use is lower (25%) than NRM's 40–45%, as housing demand is partly met through compact, medium-density settlements and infill development. Commercial land (4%) is slightly higher than the standard, reflecting ribbon development along NH-5 and the proposed bypass. Institutional allocation (12%) is significantly above the NRM benchmark (3–5%), accounting for large education, health, and administrative zones proposed in the master plan. Community open spaces (13% combined for recreation and urban forestation) also exceed the standard (4–6%), strengthening environmental sustainability and resilience. Agriculture retains the largest share at 27%, consistent with NRM's 15–25% but slightly higher to protect fertile land from urban encroachment. Overall, the proposed zoning demonstrates a balanced approach, prioritizing institutional, green, and agricultural allocations while keeping residential density compact and efficient.

[6] Guidelines for Land Allocation to Zones in the Preliminary Design of a New Town, Table 10.3, page no. 305, National Reference Manual on Planning and Infrastructure Standards

[7] Standard Land Use Classification for Urban Jurisdictions in Pakistan, Appendix 10.1, page no. 398, National Reference Manual on Planning and Infrastructure Standards

Table 4-1: Proposed Land Use Classification (NRM standards) for Hala

S.No	NRM STANDARDS		PROPOSED LANDUSE CLASSIFICATION		
	Land Use Zoning	Land Uses (%)	Level - 1 Functional Zoning	Areas (acres approx.)	Land Uses (%)
1	Residential	40-45%	Residential	1,937	25
2	Commercial	2-3%	Commercial	294	4
3	Industrial	2-10%	Economic Livestock Industrial	300	4
4	Institutional	3-5%	Health and Welfare Educational Religious Public Administration	950	12
5	Community Open Spaces	4-6%	Recreational	428	5
			Urban Forestation	562	7
6	Graveyards	2-3%	Graveyards	231	3
7	Arterial Circulation & Terminals	15-20%	Transportation Utilities and Services	1,590	20
8	Protected Reserved	15-25%	Agriculture Water Bodies Vacant / Reserved	1,552	20
	Total Area of Proposed Master Plan			7,844	100

Table 4-2: Proposed Land Use Classification for Hala

NRM STANDARDS		PROPOSED LAND USE CLASSIFICATION FOR HALA CITY								
S.N	Land Use Zoning	Land Uses (%)	S.No	Level - 1 Functional Zoning	Level - 2 Functional Zoning	Areas (acres approx.)		Land ses (%)	eas (acres approx.)	Land ses (%)
1	**Residential**	40-45%	1	Residential	Existing Residential	841	1937	10.72	1937	24.69
					Proposed Residentia	1096		13.98		
2	**Commercial**	2-3%	2	Commercial	Existing Commercia	105	294	1.34	294	3.74
					New CBD	138		1.76		
					Commercial Near Bhacha Paro	51		0.65		
3	**Industrial**	2-10%	3	Economic	Trade and Commerc	60	67	0.76	300	3.82
					Warehouses	7		0.09		
			4	Livestock	Cattle Farms	143	143	1.82		
			5	Industrial	Existing Industries	16	90	0.21		
					Cottage Industries	13		0.16		
					New Industrial Area	61		0.78		
4	**Institutional**	3-5%	6	Health and Welfare	Existing Health and Welfare	8	211	0.10	950	12.11
					Proposed Health Zon	204		2.60		
			7	Educational	Existing Educationa	40	214	0.51		
					Proposed Education Zone	174		2.21		
			8	Religious	Existing Religious	11	197	0.14		
					Proposed Religious	186		2.38		
			9	Public Administratio	Existing Public Administration	23	328	0.29		
					Public Administratio Area at N5	305		3.88		
5	Community Ope Spaces	4-6%	10	Recreational	Existing Parks and Playground	4	429	0.05	990	12.62
					Proposed Sports and Cultural Complex	81		1.03		
					Festival Grounds	197		2.52		
					Amusement Park	103		1.31		
					Large Public Park	44		0.56		
			11	Urban Forestation	Urban Forestation	562	562	7.16		
6	Graveyards	2-3%	12	Graveyards	Existing Graveyards	37	231	0.47	231	2.95

NRM STANDARDS		PROPOSED LAND USE CLASSIFICATION FOR HALA CITY								
S.N	**Land Use Zoning**	**Land Uses (%)**	**S.No**	**Level - 1 Functional Zoning**	**Level - 2 Functional Zoning**	**Areas (acres approx.)**		**Land ses (%)**	**reas (acres approx.)**	**Land ses (%)**
					Graveyard	195		2.48		
7	Arterial Circulatio & Terminals	15-20%	13	Transportation	Existing Transportation	1	1546	0.01	1590	20.27
					Proposed Bus Terminal at Hala-Shahdadupur Road	41		0.53		
					Proposed Truck Terminal at Hala-Shahdadupur Road	67		0.85		
					Road Network	1437		18.32		
			14	Utilities and Services	Existing Utilities and Services	7	45	0.09		
					Proposed Water Supply	15		0.19		
					Sewerage	8		0.10		
					Land Fill	15		0.19		
8	Protected Reserved	15-25%	15	Agriculture	Agricultural Reserve	1461	1461	18.63	1552	20
			16	Water Bodies	Canals and Ponds	22	22	0.28		
			17	Vacant	Vacant Area	69	69	0.88		
Total Area for Future Development of Hala						**7844**		**100**	**7844**	**100**

4.4.1 Residential Zone

The important features of the proposed master plan is the accommodation of all income groups through diverse housing options. Therefore, in total 1,937 acres of residential land use have been proposed this includes roads/community facilities within residential designation, with an average density of about 15 housing units per acre. This translates into approximately 28,584 housing units expected by 2045.

There are existing vacant land parcels in the southern and northern parts of the core urban area, which offer considerable potential for infill residential development. This infill can partially address the housing demand of new migrants from other areas in the immediate phase. For low-income groups in the short-term phase (priority project), 30 acres of land have been earmarked. For other income groups, mixed-density (low, medium, and high) residential areas are also proposed. In the long-term phase, additional land is reserved for residential development to meet future requirements, including provisions for apartment buildings.

The following land use division is for New Residential Schemes according to Sindh Building & Town Planning Regulations of Sindh Building Control Authority:

The Level II secondary zoning of residential land use will be as follow:

New Residential Scheme [8]		
S.No	**Land Use**	**SBCA Standards**
1	Residential	55% max
2	Commercial	5% max
3	Parks	4% min
4	Playgrounds	4% min
5	Public Uses	4% min
6	Educational	3% min
7	Roads	25% min

- **Houses**

  Taking the existing trend of housing, it is recommended to concentrate more towards houses, as the cultural context favor low to medium density housing development. However, it is preferred to follow the standards and give ample spaces to neighborhood facilities as well.

  The following guidelines are for houses zone development:

Permitted Uses	Allied Permissible Uses	Prohibited Uses
- Houses - Neighborhood level facilities like small commercial, parks, playgrounds, schools, religious, parking	- Basic utilities and municipal services (water, sewerage, electricity, solid waste collection) Road accessibility - Pedestrian friendly streetscape - Mixed-used structures at neighborhood scale (not high-intensity commercial)	- Apartment buildings (to be located only in designated apartment zones) - Large health and educational - Large commercial activities

[8] Land Allocation for New Residential Schemes as per Sindh Building & Town Planning Regulations, Chapter 20.4.1, page no 118.

Houses - Applicable SBCA Bylaws[9]					
Types	**Densities per acre**	**Plot Sizes sq.yds**	**Foot Print FP %**	**Floor Area Ratio – FAR**	**No. of Floors**
Low Density Houses	50 – 100	1,000 or above	40% - 45%	1:1	G+2 (max)
Medium Density Houses	100 - 200	400 to 999	50% - 55%	1:1 - 1:1.5	G+2 (max)
High Density Houses	200 - 300	120 to 399	65% - 75%	1:1.8 - 1:2	G+2 (max)

- **Apartments**

In Hala City, vertical development in the form of apartments already exists to some extent. With expected in-migration from rural and urban areas, apartments will become increasingly necessary to meet modern housing demands. Apartments can accommodate more households within limited land, offering higher densities than houses. The key is not to create a "concrete jungle," but to design walkable, well-planned apartment clusters with adequate open and green spaces.

The following guidelines are for apartment zone development:

Permitted Uses	Allied Permissible Uses	Prohibited Uses
- Apartments - Designated parking areas - Small commercial - Parks and playgrounds - Prayer areas	- Utilities and services - Road accessibility - Pedestrian friendly streetscape - Mixed-used structures	- Large health and educational institution - Large commercial activities

Apartments - Applicable SBCA Bylaws[10]					
Types	**Densities[11] per acre**	**Apartment Sizes sq.ft**	**Foot Print FP %**	**Floor Area Ratio - FAR**	**No. of Floors**
Low Density Apartments	325	2,500 – 4,000	40%	1:2.75	G+6 (max)
Medium Density Apartments	500	1,500 – 2,500	40%	1:2.75	G+6 (max)
High Density Apartments	650	1,000 - 1,500	40%	1:2.75	G+6 (max)

[9] Houses/Bungalows, Zoning Regulations / Area Standards, as per Sindh Building & Town Planning Regulations, Chapter 25.2, page no 141.
[10] Flat Sites Category, Zoning Regulations /Area Standards, as per Sindh Building & Town Planning Regulations, Chapter 25.4, page no 144.
[11] Residential Density Standards, as per Sindh Building & Town Planning Regulations, Chapter 20.3, page no 123.

4.4.2 Commercial Zone

This zone is mainly planned as mixed-use commercial with modern, state-of-the-art buildings. Compact, smart development will be encouraged with medium- to high-density structures and reduced footprints, ensuring efficient land utilization alongside adequate open and green spaces.

The Level II secondary zoning of commercial land use will be as follow:

- **New CBD (Commercial Business District)**
  Considering the shape and growth pattern of the town, the proposed New CBD is strategically located in a central area accessible from NH-5 Road and the existing bypass. The CBD will include regional corporate headquarters, financial centers, IT/software parks, specialized service and production hubs, and retail outlets with dedicated parking and open spaces. This area will integrate business, culture, services, and supporting facilities such as office towers, shopping malls, hotels, and serviced apartments. Development will be supported by efficient transport, communications, and urban infrastructure, ensuring an environment favorable for commercial activities.

  Hala and its environment have many sites of historical significance as Thousands of people from all over the country come to visit (ziarat) and pay tribute to these great Saint during the annual URS every year.

  - **Mausoleum of Makhdum Nuh (Suhrawardi Pir)**
  - **Tomb of Hazrat Shah Abdul Latif Bhittai (Bhit Shah)**

  Considering this tourism potential, the New CBD will also accommodate a convention center, expo center, hotels, and exhibition grounds, promoting cultural and business tourism.

- **Sub Commercial Centers**
  To complement the New CBD, sub-commercial centers is recommended along the western side of the core urban area, helping to distribute commercial activities. In addition, neighborhood-level commercial pockets within residential zones will cater to the daily retail needs of residents.

The following guidelines are for commercial zone development:

Permitted Uses	Allied Permissible Uses
- Corporate head office buildings, towers - Huge markets, malls, outlets - Large public squares and parks - Dedicated parking lots / spaces	- Pedestrian friendly streetscape - Mixed-used buildings - Medium to High Rise Apartments - Fueling stations
Applicable SBCA Bylaws[12][13]	**Prohibited Uses**
- Plot Sizes: 1,000 sq.yds. (min) - FP: 40% - 65% - FAR: 1:2.75 – 1:5.5 - Floors: G+6 & G+8 (max)	- Residential housing schemes - Large health and educational institution

4.4.3 Economic Zone

In view of contextual requirement, the emphasis is given to a range of economic activities rather than focusing solely on industrial development. The main criterion is to build on local economic potential, particularly technical services, logistics, and emerging types of markets.

The Level II secondary zoning of economic land use will be as follow:

- **Trade and Commerce**
  On the eastern side of the town along Hala–Shahdadpur Road, a dedicated trade and commerce area is proposed. This location will facilitate both inflow and outflow of trading activities, particularly connecting Hala to other areas of Matiari district. It will include grain, fruit, and vegetable markets, wholesale markets, a slaughterhouse, and storage yards. .

- **Warehouses**
  The warehouse zone is positioned next to the trade and commerce area, with accessibility from NH-5 via Hala–Shahdadpur Road. To support these trading functions, warehouses will be required in various sizes (general, bulk, liquid, dry, and cold storage). These facilities should be equipped with modern storage and logistics technologies such as fire safety systems, CCTV surveillance, computerized entry/exit data recording, and temperature-controlled facilities. .

The following guidelines are for economic zone development:

Permitted Uses	Allied Permissible Uses
- Warehouses and Workshops - Godowns and Cold Storage - Trade and Commerce Areas - Showrooms or Display Centers	- Mixed-used buildings with limited commercial/residential components for staff - Residences for workers

[12] Commercial, Zoning Regulations / Area Standards, as per Sindh Building & Town Planning Regulations, Chapter 25.3, page no 143.
[13] Flat Sites Category, Zoning Regulations /Area Standards, as per Sindh Building & Town Planning Regulations, Chapter 25.4, page no 144.

	- Fueling stations
Applicable SBCA Bylaws[14]	**Prohibited Uses**

- Plot Sizes:
  o Small size: upto 0.5 acres
  o Medium size: 0.5 to 5 acres
  o Large size: 5 acres or above
- FP: 60% - 70%
- FAR: 1:2.5 - 1:1.5
- Floors: G+1 & G+2 (max)
	- Private Residential housing schemes
	- Large health and educational institution

4.4.4 Livestock Zone

The Livestock Zone is proposed in the eastern direction along the Shaikhani Distributary, strategically positioned to serve both Hala and Bhit Shah simultaneously. Its primary objective is to promote livestock production through a planned cluster approach. The emphasis will be on cattle production and allied facilities, while poultry and other livestock activities will also be integrated to meet local and regional demand.

The Level II secondary zoning of livestock land use will be as follow:

- **Veterinary Hospital and College**
  A full-fledged veterinary hospital is proposed, supported by a training college, to cater to livestock health requirements and to produce skilled veterinary professionals.

- **Dairy Production**[15]
  Dairy area will be facilitated with mandi / cattle market, artificial insemination center, slaughter house, milk collection unit, chiller storage unit, fodder storage and purchase, and biogas/renewable energy plant to manage waste sustainably.

- Cattle Farms with Pasture and Grazing Lands
  Designated areas will accommodate buffalo, cow, sheep, goat, camel, poultry, and even emerging livestock (e.g., ostrich farming). These farms will be supported by pasture and grazing lands to ensure a sustainable feed cycle.

The following guidelines are for livestock zone development:

[14] Industrial Areas, Zoning Regulations / Area Standards, as per Sindh Building & Town Planning Regulations, Chapter 25.6, page no 145.
[15] Dairy Plots, Zoning Regulations / Area Standards, as per Sindh Building & Town Planning Regulations, Chapter 25.8, page no 149.

Permitted Uses	Allied Permissible Uses	Prohibited Uses
- Cattle Farms - Poultry Farms - Pasture and grazing lands - Slaughter Houses - Dairy production - Veterinary services - Veterinary education and training	- Low rise ancillary structures (storage, sheds, small offices) - Residences of caretakers - Related commercial activities - Fueling stations - Godowns and cold storage - Cattle market	- All non-agricultural and unrelated urban uses, particularly private residential schemes and large-scale commercial/educational developments not tied to livestock activities

4.4.5 **Industrial Zone**

The proposed New Industrial Estate will play a central role in creating employment opportunities, supporting production activities, and fostering investment, thereby strengthening the local economy of Hala. Industrial areas will help open new markets, diversify livelihoods, and boost the town's economic base.

The following land use division is for New Industrial Estate according to Sindh Building & Town Planning Regulations of Sindh Building Control Authority:

New Industrial Estate [16]		
S.No	**Land Use**	**SBCA Standards**
1	Industrial	70% max
2	Commercial	1% max
3	Parks / Playground	3% min
4	Public Uses	6% min
5	Roads	20% min
6	Residential	8% min
No roads shall be less than 40 feet in small industries. No roads shall be less than 50 feet in medium and large industries. Industrial plot of 5 acres or more, residential area for labor and staff is allowed at rear.		

The Level II secondary zoning of economic land use will be as follow:

- **Cottage Industrial Area**

  Cottage industry is a cornerstone of Hala's economy, as many households are engaged in Ajrak manufacturing, which is the city's cultural trademark. This area should be specifically promoted to enhance Ajrak production and its associated market.

  In addition, Hala is renowned for artisanal crafts such as woodwork, block and cloth printing, dyeing, weaving of Sussi and Khaddar, and pottery. These crafts represent both economic potential and cultural heritage.

  Other small-scale industries will include flour mills, rice mills, ice factories, fruit and vegetable packaging units, and feeder crop processing.

[16] Land Allocation for New Industrial Estate as per Sindh Building & Town Planning Regulations, Chapter 20.4.2, page no 124.

- **New Industrial Area (Reserved)**

  A new small industrial zone is proposed along Hala–Shahdadpur Road. It is recommended that existing industrial plots be developed and fully utilized first, before expanding into this reserved area.

  This area should primarily accommodate small-scale, non-polluting industries, avoiding heavy industry in order to maintain a clean environment. Development should be phased, starting with road-accessible plots, while reserving the remainder for future demand.

  The following guidelines are for industrial zone development:

Permitted Uses	Allied Permissible Uses
- Small Scale Industries - Processing Units - Manufacturing Activities - Warehouses or Godowns - Workshops	- Showrooms - Mixed-used buildings - Residences for workers - Fueling stations
Applicable SBCA Bylaws[17]	**Prohibited Uses**
- Plot Sizes: o Small size: upto 0.5 acres o Medium size: 0.5 to 5 acres o Large size: 5 acres or above - FP: 60% - 70% - FAR: 1:2.5 - 1:1.5 - Floors: G+1 & G+2 (max)	- Private Residential housing schemes - Large health and educational institution

4.4.6 Health and Welfare Zone

This zone is dedicated to large-scale health and welfare functions. It will host high-tech medical facilities, social welfare institutions, and supporting services, all provided with advanced infrastructure. The aim is to deliver comprehensive healthcare solutions within Hala and also to serve populations in surrounding urban and rural areas.

The Level II secondary zoning of health and welfare land use will be as follow:

- **Health and Welfare Area**

  The Health and Welfare zone is proposed near the existing bypass and NH-5 road, strategically located between the proposed CBD (to the north) and the Education Zone (to the south).

  It is recommended to extend the existing THQ Hospital and integrate Medical and Nursing Colleges, staff residences, and hostels, along with community and allied facilities. Over the long-term phase, parts of this zone should be utilized for specialized hospitals, rehabilitation centers, facilities for special children, orphanages/old age homes (e.g., Edhi model), and welfare organizations.

[17] Industrial Areas, Zoning Regulations / Area Standards, as per Sindh Building & Town Planning Regulations, Chapter 25.6, page no 145.

The area may also accommodate specialized units such as oncology, urology, fertility/infertility treatment centers, organ transplantation facilities, and advanced diagnostic and research institutes.

The following guidelines are for health and welfare zone development:

Permitted Uses	Allied Permissible Uses
- Specialized treatment centers - Medical College - Dental College - Pharmaceutical College - Nursing College - Laboratories and Diagnostic Centers - Blood Banks - Health Research Institutes	- Staff Residences (medical and paramedic) - Separate Hostels for Boys and Girls - Auditoriums, seminar halls, workshop spaces - Community facilities (parks, playgrounds, schools, clinic, neighborhood commercial) - Support facilities (gym, health club, bus stops, taxi stand, banks, fueling stations)
Applicable SBCA Bylaws[18]	**Prohibited Uses**
- Plot Sizes: 1.0 acre or above - FP: 50% - FAR: 1:1.5 - Floors: G+2 (max)	- Private residential housing schemes - Large commercial activities

4.4.7 Educational Zone

The Educational Zone is dedicated to large-scale academic and training facilities, focusing on global trends in education and the evolving needs of upcoming generations. The aim is to create a knowledge hub that delivers quality education across diverse fields, thereby upgrading the livelihoods of local and regional populations.

The Level II secondary zoning of educational land use will be as follow:

- **Educational Area**

  Similar to the Health and Welfare Zone, the main educational cluster is proposed along major connectivity corridors, specifically near the existing bypass and NH-5 road.

  The anchor facility will be a public-sector general university, which is currently absent in the town. Initially, it will focus on broad disciplines such as languages, humanities, applied sciences, arts, commerce, and social sciences. Over time, additional wings, departments, and blocks will be developed in response to societal demand.

  In addition to academic blocks, the zone will include administration offices, sports grounds, health clubs, libraries, and laboratories. As this university will cater to a large number of students, faculty, and staff, dedicated residences, hostels, and community services will also be required.

  Separate government degree colleges for boys and girls are proposed within the zone. These will be supported by essential facilities such as libraries, laboratories, washrooms, and playgrounds. Moreover, data and information centers and scientific research institutes will strengthen the research and development ecosystem.

[18] Amenity Plots, Zoning Regulations / Area Standards, as per Sindh Building & Town Planning Regulations, Chapter 25.5, page no 145.

This zone will also accommodate polytechnic colleges, women development centers (including hostels and daycare facilities), certified IT and computer training institutes, and vocational training centers. These institutions will focus on technical education and skills development for underprivileged youth, enhancing their employability.
Looking ahead, emerging disciplines such as engineering, business, management, finance, IT, media, and software development will be introduced. The purpose is to align education and research with the future job market and to enhance educational attainment at the regional level.

The following guidelines are for educational zone development:

Permitted Uses	Allied Permissible Uses
- Large scale educational areas - General Education Universities - Scientific Research Institutes - Engineering colleges / universities - Business and management schools - Finance and accountancy Institutes - IT and media Institutes - City level libraries, book banks, data and information centers	- Staff Residences (teaching and non-teaching) - Separate Hostels for Boys and Girls - Auditoriums, seminar halls, workshop spaces - Community facilities (parks, playgrounds, clinics, schools, neighborhood commercial) - Support facilities (gym, health club, bus stops, taxi stand, banks, fueling stations)
Applicable SBCA Bylaws[19]	**Prohibited Uses**
- Plot Sizes: 1.0 acre or above - FP: 50% - FAR: 1:1.5 - Floors: G+2 (max)	- Private residential housing schemes - Large commercial activities

4.4.8 Religious Zone

In the proposed master plan, one designated religious site has been allocated within Hala City, located along the proposed new bypass road. This is a long-term provision and is not an immediate development priority, as the city currently has sufficient religious facilities.

The proposed zone will allow for the development of grand religious monuments and structures, enhancing the town's cultural and aesthetic value. Future requirements of different religious groups are expected to be accommodated through subdivisions and distributed sites in other residential areas.

The following guidelines are for religious zone development:

Permitted Uses	Allied Permissible Uses
- Religious buildings like mosques, imam barghahs, mandir, churches, etc. - Religious teaching areas - Religious preaching grounds - Orphanage	- Residences for religious leaders - Accommodation for religious scholars, students - Small parks, playgrounds, clinics, commercial - Support facilities (bus stops, taxi stand, banks, fueling stations)

[19] Ibid

Applicable SBCA Bylaws[2021]	Prohibited Uses
- Plot Sizes: 1.0 acre or above - Footprint FP: 50% - FAR: 1:1.5 - Floors: G+2 (max)	- Private residential housing schemes - Large commercial activities

4.4.9 Public Administration Zone

The existing public administration offices are primarily clustered along Dargah Road. However, considering future requirements and expansion needs, a new Public Administration Zone is proposed in the southern part of Hala, near the existing bypass and NH-5 road. During the stakeholder consultation workshop, it was also suggested to locate the Public Administration Zone in this southern area, as it would conveniently serve both Hala and Bhit Shah.

The Level II secondary zoning of public administration land use will be as follow:

- **Extension of Public Administration Area**
  As Hala functions as a Taluka Headquarters, the zone will consolidate major civic and governance facilities including the Assistant Commissioner's Office, Municipal Committee, Judiciary Complex, and line department offices such as Education, Health, Agriculture, Irrigation, Public Health Engineering, and Works & Services. Supporting facilities such as NADRA, Election Commission, Post Office, utility offices, and staff residences will also be accommodated to ensure integrated service delivery for the town and its surrounding settlements.

  The following guidelines are for public administration zone development:

Permitted Uses	Allied Permissible Uses
- Taluka/Assistant Commissioner's Office Development Authority - Town Committee Complex - Line Departments - Local Government Offices - Town Planning Department - Judiciary Complex - Circuit House	- Employees Residences (for all grades) - Auditoriums, seminar halls, workshop spaces - Community facilities (parks, playgrounds, clinics, schools, neighborhood commercial) - Support facilities (gym, health club, bus stops, taxi stand, banks, fueling stations)
Applicable SBCA Bylaws[22]	**Prohibited Uses**
- Plot Sizes: 1.0 acre or above - FP: 50% - FAR: 1:1.5 - Floors: G+2 (max)	- Private residential housing schemes - Large commercial activities

[20] Ibid

[21] Religious Buildings, Plots, Zoning Regulations / Area Standards, as per Sindh Building & Town Planning Regulations, Chapter 25.13, page no 156.

[22] Ibid

4.4.10 Recreational Zone

In the existing towns, the loss of open spaces and lack of planned recreational areas is a common issue. Therefore, in the proposed master plan, recreational land use has been given higher priority to promote a healthy urban environment. Several types of regional-scale recreational activities are recommended, including sports and cultural complexes, amusement and theme parks, and festival grounds.

The Level II secondary zoning of recreational land use will be as follow:

- **Grand Park**
  A large Grand Park is proposed in the southern part of Hala, near the proposed Bypass Road. This will function as a city-level public park with designated sub-areas for families, women, and children. Facilities will include swings, seating, walking and jogging tracks, washrooms, tuck shops, and parking areas.
- **Sports Complex**
  An extension of the existing Sports Complex is proposed along Old Hala Road, featuring cricket, football, and hockey grounds, along with a cultural center and gymnasium. This extended facility will be developed in line with planning standards to strengthen existing infrastructure and promote both domestic and regional-level sports.
- **Amusement Park**
  The Amusement Park is proposed on the northern side at the intersection of the proposed New Bypass and NH-5 Road. It will provide large-scale recreational activities including amusement rides and attractions, designed with safety and accessibility in mind.
  The following guidelines are for recreational zone development:

Permitted Uses	Allied Permissible Uses	Prohibited Uses
- City scale parks - Large public squares - Sports facilities - Cultural activities - Amusement area - Special theme parks - Regional level gardens like botanical, zoological	- Ancillary structures - Accommodation for caretakers / workers - Related commercial activities - Fueling stations - Parking - Public washrooms	- All activities other than the permitted and allied permissible uses

4.4.11 Graveyards Zone

At present, Hala has multiple graveyards with sufficient capacity to meet immediate needs. However, to address long-term requirements, two new graveyards are proposed — one at the intersection of the Katcha area and the new proposed bypass on the northern side, and another in the southern part of the town.

These graveyards can be further subdivided to accommodate the requirements of different practicing religious groups in the town.

The following guidelines are for graveyard zone development:

Permitted Uses	Allied Permissible Uses	Prohibited Uses
- Graveyard area	- Related commercial activities - Accommodation for caretaker	- Other than permitted and permissible

4.4.12 Transportation Zone

In Hala City, transportation is primarily road-based, supported by key terminals and intersections. Roads serve as the backbone of economic development and social integration, improving mobility, opening new areas, and enhancing access to essential services such as education, health, and commerce. The broader regional connectivity aspects have already been detailed in Section 4.3.3, while this section focuses on the internal hierarchy of roads and transport facilities within Hala.

The Level II secondary zoning of transportation land use will be as follow:

S. No.	Major Roads	ROW (ft)	Forestation (ft)
i.	New Bypass	200	200
ii.	Existing Bypass	200	200
iii.	Hala-Shahdadpur Road	150	100
ROW – property to property distance **Forestation on both side of ROW**			

- **Proposed Road Network**

  The proposed road network builds upon the existing radial corridors (Tando Adam Road, Shahdadpur Road, Hyderabad Road, and Bhitshah Road). With the addition of a New Bypass, the existing bypass and old Katcha alignments will be upgraded to function as structured connecting corridors, acting as spines for Hala Town through widening, improved drainage, landscaping, and traffic management.

  Primary Roads: The New Bypass is designated as the primary road, running along the periphery of the town. It will have a minimum ROW of 200 feet, with a four-lane divided carriageway, service roads, medians, parking bays, pedestrian/cycle tracks, and continuous avenue plantation. To prevent ribbon development, a 200-foot urban forestation buffer is proposed on both sides.

  Secondary Roads: These include radial connections such as Shahdadpur Road and Bhitshah Road, linking Hala with surrounding towns. They will have a minimum ROW of 150 feet, with three traffic lanes, service roads, medians, footpaths, parking areas, and pedestrian/cycle tracks. These roads will also serve as sub-arterials to distribute traffic from the primary bypass into the town core.

Tertiary Roads: Tertiary roads will provide internal circulation with a ROW of at least 100 feet, including two traffic lanes, medians, footpaths, and pedestrian/cycle tracks. Examples include the proposed link road connecting to internal Road. These routes will be critical for market access, emergency services, and last-mile connectivity.

- **Public Transport Terminal**

  A multi-modal public transport terminal is proposed along the Hala–Shahdadpur Road, near NH-5, to serve as the main hub for intra- and intercity connectivity. This facility will accommodate buses, hiace vans, wagons, and taxis, with allied infrastructure such as ticketing booths, waiting areas, washrooms, shops, and rest accommodations for drivers and staff. Its location ensures efficient coverage of major residential, educational, and health-related trip generators.

- **Truck Terminals**

  A dedicated truck terminal is also proposed on the Hala–Shahdadpur Road, strategically positioned to manage heavy traffic linked with industrial and trading activities. The terminal will cater to goods transport, container storage, and logistics operations, thereby strengthening Hala's role as a regional trading hub. Facilities will include container yards, warehouses, repair bays, offices, driver residences, rest areas, and basic services.

- **Air and Railway Connectivity**

  Currently, Hyderabad Airport is non-functional and not serving passenger or cargo traffic. Given the present population size of Hala and the regional demand profile, reliance on Karachi Jinnah International Airport (approx. 150 km south) is the most viable option for both passenger and freight air connectivity in the short- to medium-term. This arrangement is practical considering Karachi's established status as Pakistan's largest aviation hub with international linkages.

  For future planning, once regional demand for air services grows and Hyderabad Airport is rehabilitated or reactivated, Hala can benefit from this closer facility. Until then, strategic integration with Karachi's airport, complemented by improved road/rail links, will remain the rational solution for air connectivity.

  On the railway side, Hala connects through the Karachi–Lahore main line via Tando Adam Junction and Odero Lal Station. While current operations are limited, these junctions remain strategic for freight and passenger services. Future planning should focus on intermodal integration of bus and rail terminals to maximize regional accessibility.

  The following guidelines are for transport zone development:

Permitted Uses	Allied Permissible Uses
- All types of parking areas (public and private)	- Drivers and staff accommodation

- Designated ROW - Green belts - Footpaths, pedestrian and cycle tracks - Traffic management devices	- Support offices, rest areas, washrooms, shops etc. - Street furniture like lights, trash bins, benches etc.
Applicable SBCA Bylaws[23]	**Prohibited Uses**
- No direct access to major roads will be allowed except through service road - No structure or part of a structure may project beyond building line	- Any form of unauthorized encroachment - Residential housing schemes or commercial plazas fronting directly onto primary roads

4.4.13 Utilities and Services Zone

Provision for utilities and services has been made in the master plan to ensure large-scale and sustainable infrastructure support for the city's growth. This zone accommodates facilities for water supply, wastewater management, solid waste disposal, and power supply.

The Level II secondary zoning of utilities and services land use will be as follow:

- **Water Supply**
  The primary source of water supply is groundwater. Much of the older supply infrastructure has been abandoned. A new water supply facility is proposed at the intersection of Hala–Shahdadpur Road and NH-5. This site has been reserved for water reservoirs, allied infrastructure, and treatment facilities, including filtration and advanced purification plants, to meet future demand.

- **Sewage Treatment Plant**
  Two sites are designated for sewage treatment: one in the southwest near the Katcha area and another close to the existing bypass and NH-5. These sites are located at lower elevations relative to the main drains, allowing reliance on gravity flow. Initially, simple **oxidation ponds** are proposed, with phased progression toward advanced wastewater treatment systems as demand increases.

- **Landfill Site**
  A landfill site is proposed on the southern outskirts of Hala, selected with consideration of prevailing wind direction. Designed according to sanitary landfill principles, this site is expected to serve the town for at least 20 years.

[23] Highway Major Roads, General Standards, as per Sindh Building & Town Planning Regulations, Chapter 21, page no 126.

The following guidelines are for utilities and services zone development:

Permitted Uses	Allied Permissible Uses	Prohibited Uses
- Land use for Utilities and Services like Water Supply, Filtration, Oxidation Ponds, Sewage Treatment, Landfill Sites, Grid Station etc.	- Related land development and building activities - Accommodation for staff, operators and labors. - Specific parking area.	- Other than permitted and permissible

4.4.14 **Urban Forestation Zone**

Urban forestation is proposed along the New Bypass to act as a buffer against uncontrolled ribbon development and to ensure that growth occurs only in planned residential areas regulated under building control rules. This green belt will serve both as an ecological barrier and as a visual and environmental enhancement for the corridor.

To protect the New Bypass from unorganized private development, a 200-foot urban forestation strip is reserved on both sides of the road. Development within this strip should be strictly prohibited, with enforcement of regulations to maintain the bypass as a green corridor. Major road intersections will initially feature landscaped roundabouts, with adequate space reserved for future grade-separated junctions.

It is recommended to plant native and climate-resilient species (trees, shrubs, and grasses) to ensure sustainability, low maintenance, and ecological compatibility with the local environment.

The following guidelines are for urban forestation zone development:

Permitted Uses	Allied Permissible Uses
- Land use for horticulture, landscaping, plantation, green belt, forestation.	- Related land use and activities, while no land development or buildings. - Temporary accommodation for labor and security persons. - Specific parking area for any accident and unplanned incident.

4.4.15 **Agricultural Zone**

To control urban sprawl and safeguard farmland, agricultural reserve areas are proposed along the New Bypass. This approach not only confines the spatial growth of the town but also preserves the continuity of agricultural activities in close proximity to urban areas. Maintaining these reserves will contribute to a healthy peri-urban environment while reducing pressure on costly infrastructure expansion.

The agricultural zone also ensures that existing villages and settlements on the town's periphery remain intact, protecting their livelihoods and preventing forced relocation. Recommended crops for this zone include sugarcane, wheat, rapeseed and mustard, cotton, jowar, maize, gram, and barley. Owing to its

fertile soil and favorable topography, Hala is particularly suitable for sugarcane cultivation, while fruit orchards further diversify the local agricultural economy.

The following guidelines are for agriculture zone development:

Permitted Uses	Allied Permissible Uses
- Land use for proposed agricultural and its necessities.	- Related land activities with respect to its rules and regulations. - Accommodation for farmers and labor in associations with MC.

4.4.16 Water Bodies

In Hala City, the primary water bodies are the Shaikhani Minor and Tarah Minor canals, which serve as important ecological corridors and local water sources. To protect and enhance their role in the urban landscape, comprehensive beautification and conservation measures are recommended. These include:

- Protection of its right of way and removal of encroachments
- Control on incompatible development in its surrounding
- Restriction on disposal of waste water
- Restriction on dumping of solid waste
- Provision of roads on both sides of its course

Introducing native tree plantation and green belts along the canal edges to improve aesthetics, provide shade, and reduce erosion

The following guidelines are for Water Bodies zone development:

Permitted Uses	Allied Permissible Uses
- Land use for water bodies like rivers, tributaries, canals, water channels, irrigation network, ponds, lakes, water courses.	- Related land use and activities, while no land development or buildings. - Temporary accommodation for labor and security persons.

4.4.17 Vacant Zone

The vacant zone is proposed to serve as a reserved land resource for emergency and disaster-related needs. These areas can be utilized during calamities for portable housing, mobile healthcare units, temporary shelters for displaced populations, storage of bulk materials, or relief camps. The identified vacant land is located on the periphery of Hala City, directly accessible from the New Bypass, ensuring rapid deployment and minimal disruption to regular urban activities.

However, strict control measures are essential to prevent unplanned or leapfrog development on these reserved lands. Such control will safeguard their availability for emergencies and avoid pressure to convert them into residential or commercial use.

The following guidelines are for vacant zone development:

Permitted Uses	Allied Permissible Uses
- Land use for proposed emergency and imminent necessities	- Related land development and building activities. - Temporary accommodation for operation and maintenance staff in associations with MC.

SECTOR WISE PROPOSED STRATEGIES

5. HOUSING

5.1 Existing Situation

Adequate housing is fundamental to improve living standards among poor and low-income households because it is one of the major components of the social infrastructure, the lack of which begins to offset the positive effects of economic development. Without adequate shelter, families are condemned to poverty, poor health, low educational attainment, vulnerable to natural disasters and the chaos of civil conflict. Lack of safe, affordable, decent housing is a major contributor to poverty and affects all aspects of a family and community's life.

While a majority of surveyed houses are structurally satisfactory, service deficits particularly sanitation significantly reduce overall housing quality. A sample survey of the town reveals that approx. 25% of the houses were constructed in between 6 to 10 years and 41% of the houses were falling in the 81-120 sq. yards range with average 2 rooms. As far as the utility services in the houses are concerned, basic services need improvement as the sample survey reveals 31% of the houses have drained (flush system) in their houses while 69% of the houses have un-drained toilets which require manual cleaning.

Table 5-1: Housing Statistics

Administration Unit	Census 2023				Population Projection in 2025 (Current Year)		Population Projection in 2045	
	Population	AGR	No. of HH	HH Size	Population Projection	Housing Units Projection	Population Projection	Housing Units Projection
Hala MC	71,094	1.31	5.44	13,069	72,954	13,411	114,652	21,076
Hala Old TC	13,992	1.20	5.28	2,650	15,509	2,683	43,400	7,509
Combined Population of Hala MC and Hala old TC	85,086	-	-	15,719	88,463	16,094	158,052	28,584

This section further elaborates on the general housing condition of Hala town. The major reasons for the housing backlog in Hala include limited availability of resources, gaps in planning capacity, and land development policies that have not effectively addressed the needs of all socio-economic groups. General housing condition of surveyed houses was satisfactory although major reasons for the housing backlog are lack of resources, inadequate planning, and wrong land development policies. In Hala urban area the problem manifests as unstoppable growth of squatter settlements through encroachment of state and private land. Up gradation of Katchi Abadis and policy / strategic guidelines need to be formulated for stoppage of this practice.

Based on the existing housing stock, household size, sanitation deficits, and informal settlement trends, the housing strategy for Hala must prioritize (i) expansion of serviced land supply, (ii) upgrading of Katchi abadis, (iii) sanitation improvements within residential areas, and (iv) affordability mechanisms for low-income households.

Katchi abadis in Hala Town[24]

In Hala Municipal Committee, there are several Katchi Abadis, or informal settlements, that form an integral part of the city's urban landscape. These settlements, as identified by the Sindh Katchi Abadies Authority in December 2019, vary in size and population, underscoring the diverse living conditions within Hala. The Bheel Colony (Ghotana Mohallah), with an area of 3.55 acres and 89 housing units, is home to approximately 400 residents. Brohi Colony, spanning 6.82 acres, houses 171 units and around 600 residents. Chawaly Colony and Essal Colony, covering 4.14 and 3.27 acres respectively, have populations of 350 and 300. Jheel Colony, one of the larger settlements with 8 acres, has 200 housing units for about 300 people. Latif Colony and Makhdoom Eijaz Colony, with 6.32 and 7.96 acres respectively, accommodate 800 and 1200 residents each. Other notable settlements include Manghran Khad Colony (3.17 acres, 500 residents), Menghwar Colony (4.45 acres, 1200 residents), Sochi Colony (3.07 acres, 180 residents), and the largest, Solangi Colony, which spans 18.60 acres and houses 465 units with 300 residents.

The list of Katchi Abadis present in Hala MC is as follows:

Table 5-2: List of Katchi Abadis (informal Settlement) in Hala Municipal Committee

SINDH KATCHI ABADIS AUTHORITY DEC-2019					
S. No.	**LOCATION (LOCAL COUNCIL)**	**NAME OF KATCHI ABADI**	**TOTAL AREA (ACRES)**	**NO. OF HOUSING UNITS**	**ESTIMATED POPULATION**
1	HALA M.C	BHEEL COLONY (GHOTANA MOHALLAH)	3.55	89	400
2	HALA M.C	BROHI COLONY	6.82	171	600
3	HALA M.C	CHAWALY COLONY	4.14	104	350
4	HALA M.C	ESSAL COLONY	3.27	82	300
5	HALA M.C	JHEEL COLONY	8.00	200	300
6	HALA M.C	LATIF COLONY	6.32	158	800
7	HALA M.C	MAKHDOOM EIJAZ COLONY	7.96	199	1200

[24] Data provided by Sindh Katchi Abadis Authority, December 2019

SINDH KATCHI ABADIS AUTHORITY DEC-2019					
S. No.	**LOCATION (LOCAL COUNCIL)**	**NAME OF KATCHI ABADI**	**TOTAL AREA (ACRES)**	**NO. OF HOUSING UNITS**	**ESTIMATED POPULATION**
8	HALA M.C	MANGHRAN KHAD COLONY	3.17	80	500
9	HALA M.C	MENGHWAR COLONY	4.45	112	1200
10	HALA M.C	SOCHI COLONY	3.07	77	180
11	HALA M.C	SOLANGI COLONY	18.60	465	300
TOTAL			**69.35**	**1737**	**6130**

5.2 Issues

The following are the major issues in the housing sector:

- Inadequate supply of developed land.
- Poor land administration with inadequate legal and regulatory systems.
- Housing and associated infrastructure is in dilapidated condition requiring improvement / replacement
- Unchecked growth of squatter settlements: Katchi Abadis encroachment on state and vacant land is a direct outcome of the housing shortage.
- Shortage of finance continues to be the major constraint in housing production, maintenance and growth.
- Due to inflationary trends in the economy; the cost of building material have sky rocketed.
- Most of the population of Hala is living in slums areas and dilapidated houses in the core urban area of Hala.
- The housing density is quite high in the core urban area of Hala, causing congestion and issues of poor light and ventilation.
- There is a lack of basic utility services such as water supply, sewerage and drainage system in Hala town, but the living conditions in the core urban area of Hala are very poor due to the lack these services.

5.3 SWOT analysis of Hala City Housing Sector

HOUSING			
Strength	**Weakness**	**Opportunity**	**Threats**
1. Diverse housing Types. 2. High Demand for Residential and Commercial Spaces 3. Potential for Economic Growth 4. 85% of the population lives in self-owned houses. 5. Approximately 46% of the population resides in Pacca houses. 6. Most of the formal population is served by electric, and gas.	1. The cost of adequate housing can be prohibitive for low-income households, leading to housing insecurity and exacerbating poverty. 2. Infrastructure Strain 3. Housing Affordability Challenges 4. Regulatory and Governance Challenges.	1. Meeting Housing Needs. 2. Infrastructure Development 3. Enhancing livability. 4. Low-cost Housing policies. 5. Basic Need Analysis Approach. 6. Opportunity for local micro financing for housing	1. Haphazard growth 2. Housing Insecurity 3. Affordability Challenges 4. Katchi Abadis

5.4 Need Assessment

In Hala City, the assessment of housing needs, considering the population projections from 2023 to 2045, presents a clear picture of the future demands for urban infrastructure and housing. As of the 2023 Census, Hala City had a population of 85,086 with 15,719 housing units. This number is projected to rise significantly in the coming years. By the year 2025, the population is expected to reach 88,463, necessitating an increase in housing units to 16,094. Looking further ahead to 2045, the population of Hala City is projected to nearly double, reaching 158,052. Correspondingly, the need for housing units is projected to grow to 28,584.

Table 5-3: Need Assessment

Area	Census 2017		Census 2023		Population Projection in 2025		Population Projection in 2045	
	Population	Housing units	Population	Housing Units	Population Projection	Housing Units Projection	Population Projection	Housing Units Projection
HALA CITY	78,810	13,848	85,086	15,719	88,463	16,094	158,052	28,584

Thus, between 2025 and 2045 the city will require an additional 12,490 housing units (28,584 – 16,094), excluding replacement of dilapidated stock and requirements for de-densification and relocation from hazardous areas. Meeting this need requires not only new construction but also:

- Upgrading and regularization of existing katchi abadis:
- Rehabilitation of old housing stock in core urban areas; and
- Improving infrastructure and services to transform "houses" into livable, serviced "neighborhoods".

5.5 Policy Guidelines[25]

Housing sector is divided in various sub sectors. Policy guidelines for all sub sectors are given below:

5.5.1 Policy Measures for Land

- Employing the Land Banking Approach
- Land Pooling by Engaging the Small Landowners
- Growth Boundaries and Green Belts
- Land Hoarding and Speculation
- Land Consolidation and Comprehensive Land Information Systems

5.5.2 Policy Measures for Housing Finance

- Flexible & small loans with low or zero-interest rates to build or improve homes incrementally.
- Micro-financing could be provided through NGOs in line with the Akhuwat and Kashf foundation's models.
- Fixed Term loans for different periods like 5, 10 and 20 years.
- Re-introduce the option of mark-up subsidy for low cost and affordable housing. This subsidy could only be for the eligible poor income class emanating from a credible data base such as BISP (Benazir Income Support Program).

5.5.3 Policy Measures for Katchi Abadis, Squatter Settlements & Slums[26]

These are two planning approaches to effectively deal with slums and squatter settlement issues in a sustainable manner. These effectively tackle not only the physical upgradation of the area, but also promotes its social, economic and environmental development.
The wide-ranging and far-reaching policy measures to overcome the issue of slums and squatter settlements in major cities of Pakistan:

[25] Strategic National Housing Policy Framework 2025

[26] Strategic National Housing Policy Framework 2025

- High-rise with Mixed Land Use Development:
- Land/Apartment Ownership Rights
- Preference to Apartment Buildings

5.5.4 Policy Measures for Low Income Housing[27]

- Part of the sale proceeds of valuable public land shall be set aside to provide plots for low-income housing and housing for the poor and needy at concessionary rates
- The land identified for low-cost housing shall be physically accessible preferably near the city centre, socially acceptable, economically affordable and environmentally resilient
- Only one house for one low-income family in life in entire country will be allowed
- Low-cost houses shall be allowed to use certain part i.e. upto 25% of the house for commercial activity to earn livelihood for the family at home without compromising the local environment.
- The minimum size of the house shall not be fixed.
- Dedicated approval window for affordable housing
- Slums / Katchi abadies upgradations and regeneration must be carried out

5.5.5 Policy Measure for Rural Housing[28]

- The provincial and local Govt. departments shall identify state land (Shamlat Deh) for rural housing in and around the existing villages, settlements and towns preferably towards the growth patterns of the existing settlements which is free from all sort of encumbrances
- Dedicated low-cost housing programs for rural areas should be launched
- Microfinance initiatives should be launched to provide small, low-interest loans for rural home construction and renovation.
- Local Government departments, rural local councils, shall provide standard and cost-effective designs and plans to the prospective home builders
- Union councils with the help of tehsil councils will prepare drawings of road/street network in advance in rural areas/settlements for planned future growth/development
- Schemes for solar and wind energy, particularly for rural housing, keeping in view the local conditions, needs to be launched by the Govt.

5.6 Strategic Development Plan

The aim of this strategic development plan is to facilitate all for the provision of housing, in this regard following strategies need to be focused:

- Incremental housing schemes on the lines of Orangi, Qasba, Khuda Ki Basti etc. in Karachi should be initiated based on lessons of experience.
- Development of indigenous and cost-effective approaches particularly for low-income group and mass production.

[27] Strategic National Housing Policy Framework 2025

[28] Strategic National Housing Policy Framework 2025

- Regularize notified Katchi Abadis complemented by policies to restrain the emergence of new Katchi Abadis.

i. Long Term Plan:

- To address high land prices and limited serviced land, the strategy emphasizes land banking, land pooling, and phased affordable housing development.
- To address the growth of katchi abadis, the strategy combines settlement upgrading with preventive provision of serviced residential land.
- To leverage high home ownership and pacca housing stock, incremental housing and rehabilitation approaches are prioritized.
- To address infrastructure strain in dense and older areas, neighborhood-level upgrading and core area revitalization are proposed.
- Support research and development for economical building materials and modern construction technologies to reduce housing costs over time.
- Establish a Municipal Land Bank to ensure the availability of suitable, affordable, safe, and serviced land parcels for future housing schemes.
- Introduce a mechanism whereby approved housing schemes are developed only after coordination with utility agencies, ensuring provision of piped water supply, sewerage, drainage, electricity, and gas.
- Implement a phased affordable housing program for low-income groups up to 2045 through a one-window facilitation mechanism covering planning approvals, technical guidance, and access to finance.
- Formulate and enforce Green Building Byelaws to promote water conservation, energy efficiency, and waste reduction in residential development.
- Protect agricultural land from unplanned residential encroachment by enforcing growth boundaries and promoting compact and multi-family housing where appropriate

ii. Short Term Plan:

- Increase the proportion of small-sized plots for low-income groups in all new housing schemes.
- Promote public-sector low-income housing schemes, including pilot projects to test scalable models.
- Establish or facilitate low-income housing funds to support affordable and incremental housing drawing on microfinance and community-based financing models.
- Undertake rehabilitation and face-lifting of old housing stock in core urban areas to improve livability and neighborhood character.
- Relocate or remove illegal settlements form hazardous locations, while prioritizing upgrading and regularization of notified katchi abadis within safe areas.

- Improve and extend basic utilities and community facilities (water supply, sanitation, drainage, access roads, street lighting) in residential neighborhoods.
- Upgrade informal settlements through in-situ improvements rather than relocation wherever feasible.
- Encourage incremental housing development, supported by microfinance and technical assistance, enabling households to build and improve housing in stages.

5.7 Priority Projects

➢ Construction of Housing Schemes for Low Income People

According to the 2023 Census, the total housing stock in Hala is 52,849 units, of which 2,218 (4%) are rented houses. A significant portion of households have low incomes, which restricts their ability to acquire adequate housing and has contributed to the proliferation of slums and informal settlements. Living conditions in these areas are poor, with residents facing numerous challenges, including a lack of essential utility services. To address these issues, it is imperative for the public sector in Hala to implement an affordable housing program specifically designed for low-income households as part of an overarching urban strategy. The program should be launched in areas where slums already exist. It will be developed in phases and is expected to target at 220 families in the first phase.

The purpose of this project is

- Provide affordable shelters to the poor people
- Through this process alternate resettlement of the congested part of the towns may be possible
- Improvement in living standards, with enhanced access to basic services.

The housing scheme will be as per the minimum standards to reduce the cost of the project

➢ Scope

The project focuses on providing affordable and secure housing for low-income households currently residing in slums and informal settlements in Hala. Phase 1 aims to resettle 220 families into planned urban environment, improving their access to essential services and overall living standards.

The housing units will be developed on 80 sq.yd. residential plots and will include two rooms, a kitchen, a bathroom, and a living area. The project scope also includes the development of supporting infrastructure such as road networks, water supply, sewerage, drainage, electricity, and community amenities.

To support financial sustainability, commercial plots will be integrated within the scheme, enabling partial recovery of capital investment through commercial property sales. The initiative will be executed in phases to ensure smooth relocation and systemic upgrading of informal area.

➢ Size

The Affordable Housing Project will accommodate 220 residential units in phase 1, benefiting approximately 1300-1500 residents (based on an average household size of 6-7 persons). Each housing plot will measure 80 sq.yd., ensure an efficient use of land while maintain acceptable living space standards for low-income households.

In addition to residential units, a limited number of commercial plots and buildings will be included to support economic activity and help offset development costs. The total project area will encompass residential, commercial, and community service components, along with the necessary physical infrastructure to ensure a safe, healthy, and sustainable living environment.

- **SDG's Alignment**

I. Goal 3 – Good Health and well Being

Improved living environments through access to clean water, sanitation, better housing, and reduced overcrowding will directly reduce the incidence of communicable diseases and improve public health. Healthier communities lead to increased productivity and reduced healthcare costs, contributing to overall societal well-being.

II. Goal 11 – Make cities and human settlements inclusive, safe, resilient and sustainable

This initiative promotes inclusive urban development through the provision of affordable housing, improved public infrastructure, and equitable access to services. It supports the creation of safe, resilient, and sustainable communities, particularly benefiting low-income and vulnerable populations.

- **Implementing Authority -** Government of Sindh, Hala Municipal Committee& Hala Town Committee, etc.
- **Preliminary Cost estimate**
  Estimated Cost: 1,000 million Approx. (Short Term)

a) Phase 1: Low Income Housing Project 1- Site and Services. 1,000 million approx**.** Short Term

S. No.	Project Name	Estimated Cost In Millions	ADP	Non ADP	Status	
					Short Term	Long Term
	Housing					
# 1	Phase wise Land acquisition for low-income public housing project	300	**-**	Non ADP	**Short Term**	-
#2	Phase wise Master Planning & infrastructure Designing of low-income public housing project for additional population	700	-	Non ADP	-	**Long Term**

5.8 Immediate Action Plan for Core Urban Area

- **Improvement of Housing in Core Urban Areas**

The core urban areas of Hala MC & TC, particularly the older sections, are experiencing decay and face significant housing challenges. Revitalization of these neighborhoods is essential to improve residents living conditions. According to Census 2023, semi-pacca housing (stone/brick in mud mortar with thatched roofing) makes up 11% of the housing stock in the core urban area. In addition, according to socio-economic survey results, only 7% of Hala Town's drainage system consists of semi-covered drains, a significantly small portion of the overall infrastructure. This scarcity of semi-covered drains exacerbates the challenges faced by the town in effectively managing its wastewater and drainage.
Upgrading the core urban area is essential for restoring livability, improving public health, and enhancing the socio-economic environment. The Immediate Action Plan (IAP) proposes two tiers of interventions:

Tier 1: Quick-Win Improvements (Priority Streets- 4,160 meters)
Targeted interventions along high-density, high-visibility corridors including Brahman Street, Ayesha Hospital Road, Misri Road, Ansari Street, Peer Moula Bux Colony Road, Bagharhi Bus Stand towards Makhdoom Ghulam Haider GBHS Hala New, Intersecting from court road towards Governmental Vocational School, O/C Makhdoom Ameen Faheem PMS to GBPS Makhdoom Moula Road, Back Street of R.H.C (Old Hala) towards Sarwari Road, Sarwari Graveyard (Old Hala) Road, Sarwari Graveyard (Old Hala) Western Road and Back side of Shaheed Muhammad Aslam Memon GBHS Old Hala.

Tier 2: Medium-Term Upgrading for Entire Core Residential Area (317 Acres)
Comprehensive rehabilitation of housing facades, pavements footpaths, utilities, stormwater drainage, sanitation lines, streetlights, street furniture, green pockets, and garbage collection facilities across the entire core residential area.

These interventions support **SDG 11.1 (adequate housing), SDG 6.2 (safe sanitation), and SDG 7.2 (clean energy access).**

Narrow Streets

Broken Streets

I. Scope

Tier 1-Priority Streets (Quick-Win IAP)

These streets have been identified as **urgent action zones** due to high population density, heavy foot traffic, and severe deterioration.

a. Urban Face-Lifting Program

Scope of Work

- Plastering, painting, and structural correction of front facades
- Alignment of uneven facades to improve visual appearance
- Minor structural reinforcement where necessary
- Government-funded façade interventions, internal improvements covered by homeowners

b. Street & Pavement Rehabilitation

- Use of **paver blocks,** flooring, or brick tiles.
- Sub-base re-grading and utilities corridor correction prior to paving.
- Improvement of pedestrian accessibility.

c. Solar Street Lighting

- Installation of **245 solar LED street lights** along the km priority network.
- Poles: 16-18 ft, 150-200W LED heads.

d. Greenery & Environmental Improvement

- Plantation of **native shade trees** along priority corridors.
- Creation of micro-green spaces and community pocket gardens.
- Designation of **micro garbage collection points** along priority streets
- Linkage with MC's primary collection route

Tier 2 – Medium-Term Upgrading for Entire Residential Area (317 Acres)

Sr. No	Street	Length (m)	Estimated Houses
1.	Brahman Street	400	44
2.	O/C Makhdoom Ameen Faheem PMS to GBPS Makhdoom Moula	500	55
3.	Ayesha Hospital Road	300	33
4.	Ansari Street	340	37
5.	Misri road	410	45
6.	Peer Moula Bux Colony Road	360	40
7.	Bagharhi Bus Stand towards Makhdoom Ghulam Haider GBHS Hala New	500	55
8.	Intersecting from court road towards Governmental Vocational School	240	26
9.	Back street of R.H.C (Old Hala) towards Sarwari Road	360	40
10.	Sarwari Graveyard (Old Hala) Road	160	18
11.	Sarwari Graveyard (Old Hala) Western Road	130	14
12.	Back side of Shaheed Muhammad Aslam Memon GBHS Old Hala	460	51
	Total	**4,160**	**458**

This phase covers the wider core urban area and is intended for ADP-funded implementation.

Key Interventions:

- Upgradation of **internal streets (~36 km total).**
- **Pavement rehabilitation** in all unpaved lanes.
- Installation of **solar lights.**
- **Housing front facades** improved.
- Tree plantation of **native trees** across neighborhoods.
- Utility upgrades: minor drainage corrections, covered drains, sanitation improvements.

II. Size:

The program will target approximately 317 acres of residential land in the core urban area (57.78% of total 549.16 acres, as per Land use Table 3.1), covering streets, utilities, and public spaces within residential clusters.

Tier 1: **4,160 meters** of priority streets impacting **458 households**

Tier 2: **~36 km** internal neighborhood network covering **317 acres** of residential area

III. Preliminary cost estimate

The preliminary cost estimate will include itemized costs for each component Tier-1:

Table 5-4 : Preliminary cost estimate for Rehabilitation work Housing in Hala	
Rehabilitation work	**Cost (Million)**
Urban Face-Lifting Program	**50**
Street and Pavement Rehabilitation	**70**
Solar Street Lighting and Greenery	**30**
Total	**150**

Note:

The 150 million PKR estimate covers Tier 1 (Priority Streets) only.

Tier 2 will require detailed engineering designs and a separate PC-I, for ADP-funded projects.

Total Estimated Cost: 150 million

IV. Implementation Framework

- **Funding:** Municipal budgets, provincial ADP allocations, PPPs, and external development partners (aligned with SDGs).

- **Execution:** Phased approach – short-term quick wins, medium-term infrastructure upgrades, long-term smart systems and redevelopment.

- **Monitoring & Evaluation:** Sector-specific KPI's (e.g., households with piped water, number of schools rehabilitated, km of roads upgraded, improved patient outcomes).

- **Sustainability:** Dedicated O&M budgets, community participation, and revenue generation (waste fees, parking, commercial activity).

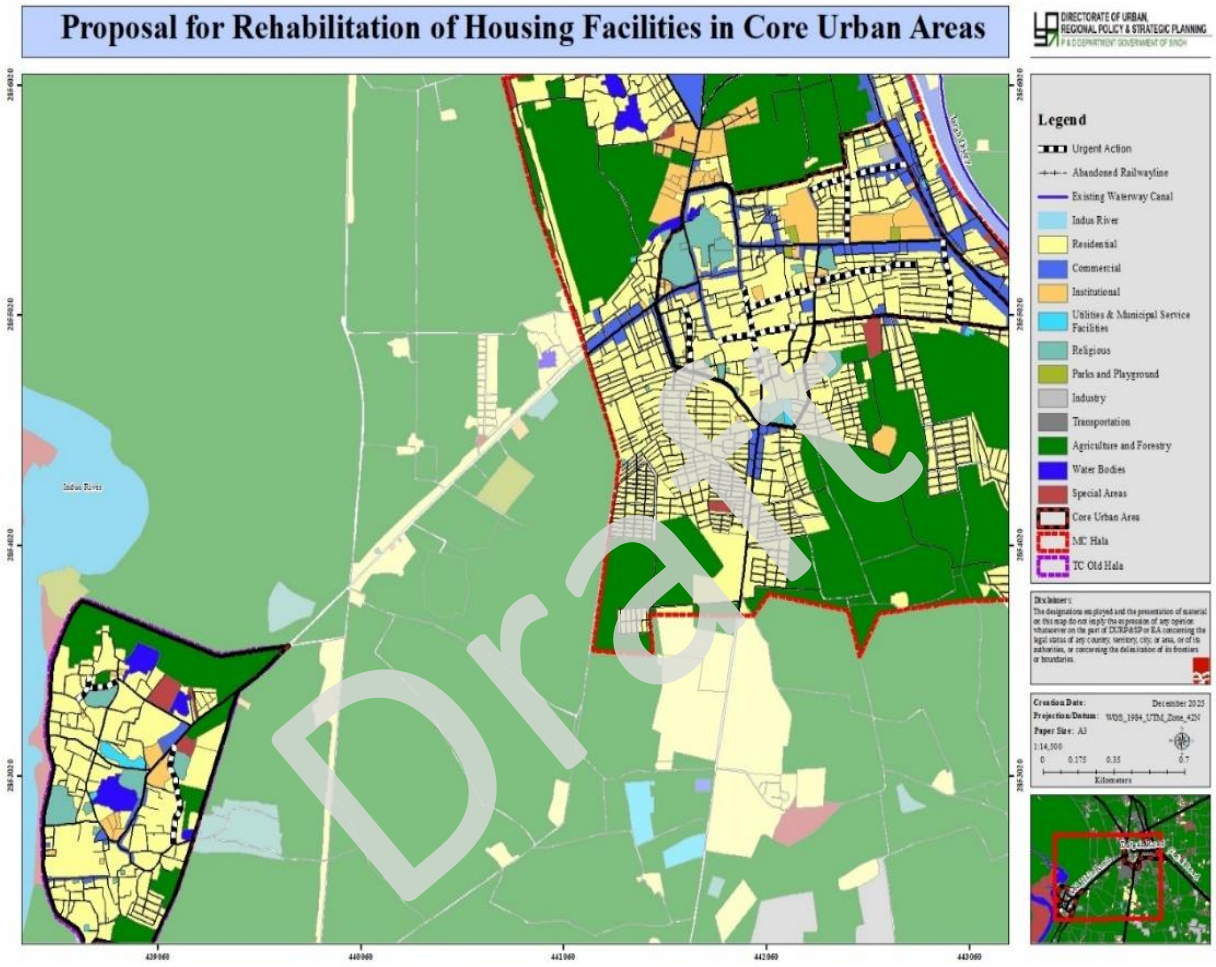

Figure 5-1: Proposal for Rehabilitation of Housing Facilities in Core Urban Areas

Proposal for Urgent Action Facilities in Core Urban Areas

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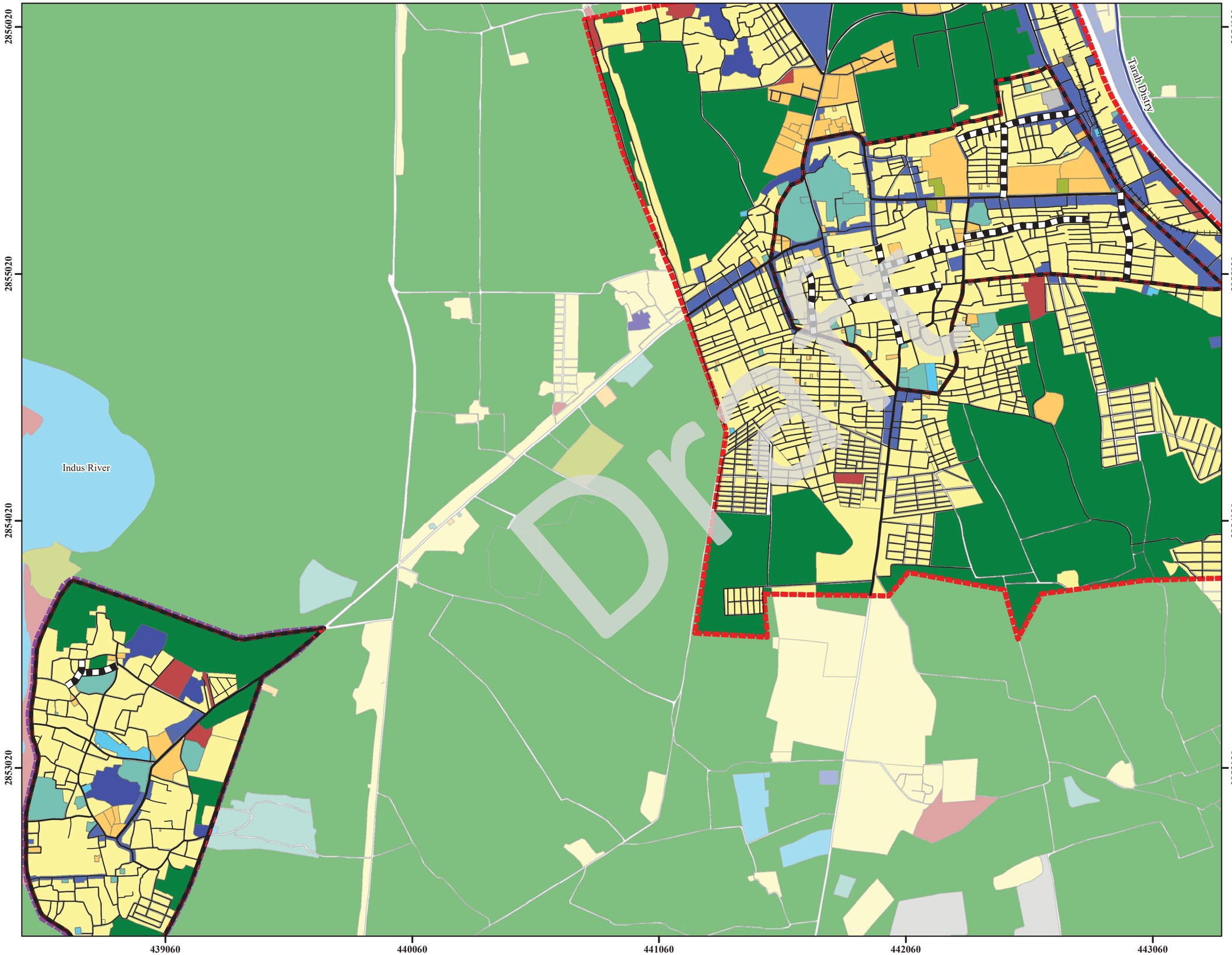

Legend

- Urgent Action
- Abandoned Railwayline
- Existing Waterway Canal
- Indus River
- Residential
- Commercial
- Institutional
- Utilities & Municipal Service Facilities
- Religious
- Parks and Playground
- Industry
- Transportation
- Agriculture and Forestry
- Water Bodies
- Special Areas
- Core Urban Area
- MC Hala
- TC Old Hala

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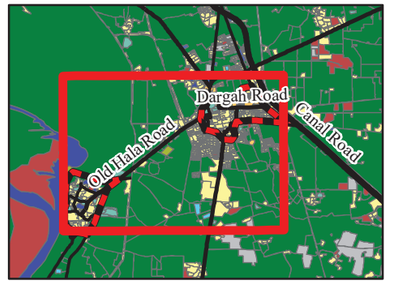

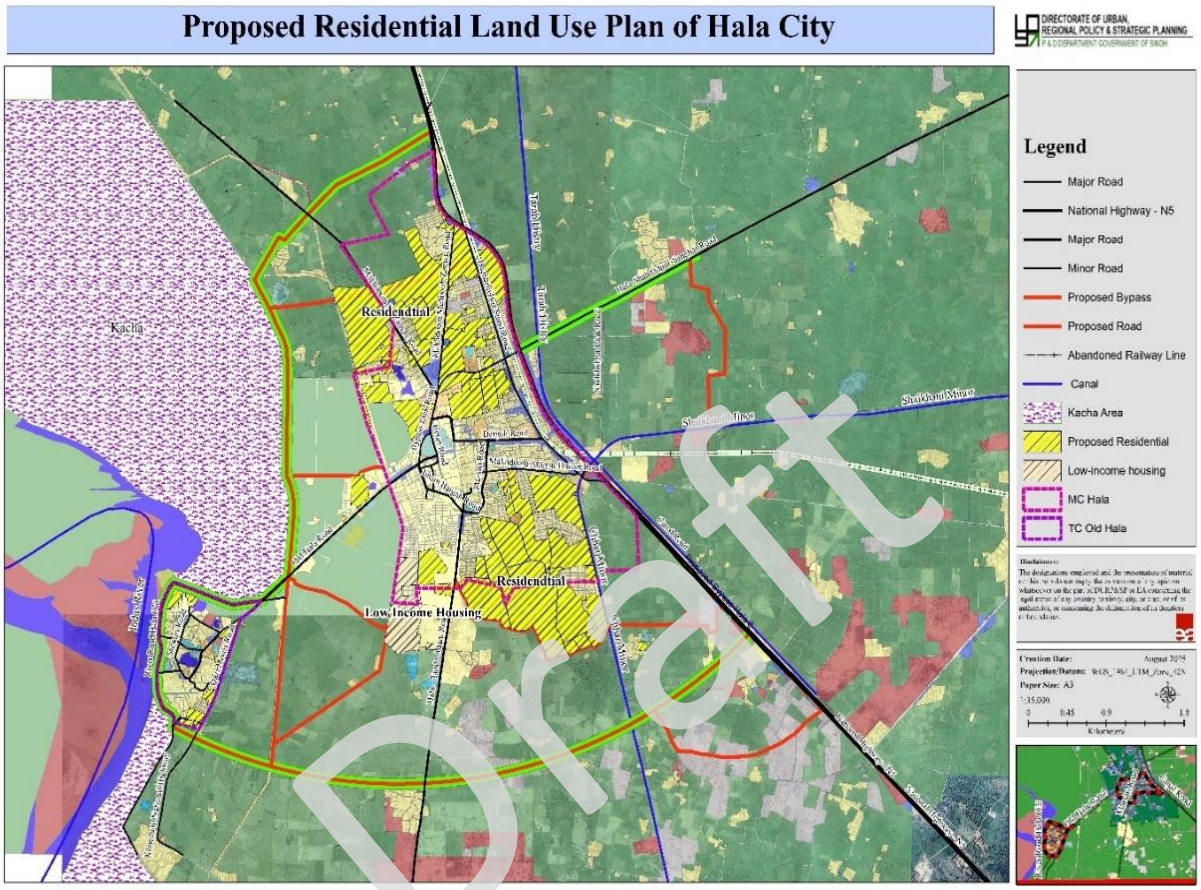

Figure 5-2. Proposal for Residential Land use

Proposed Residential Land Use Plan of Hala City

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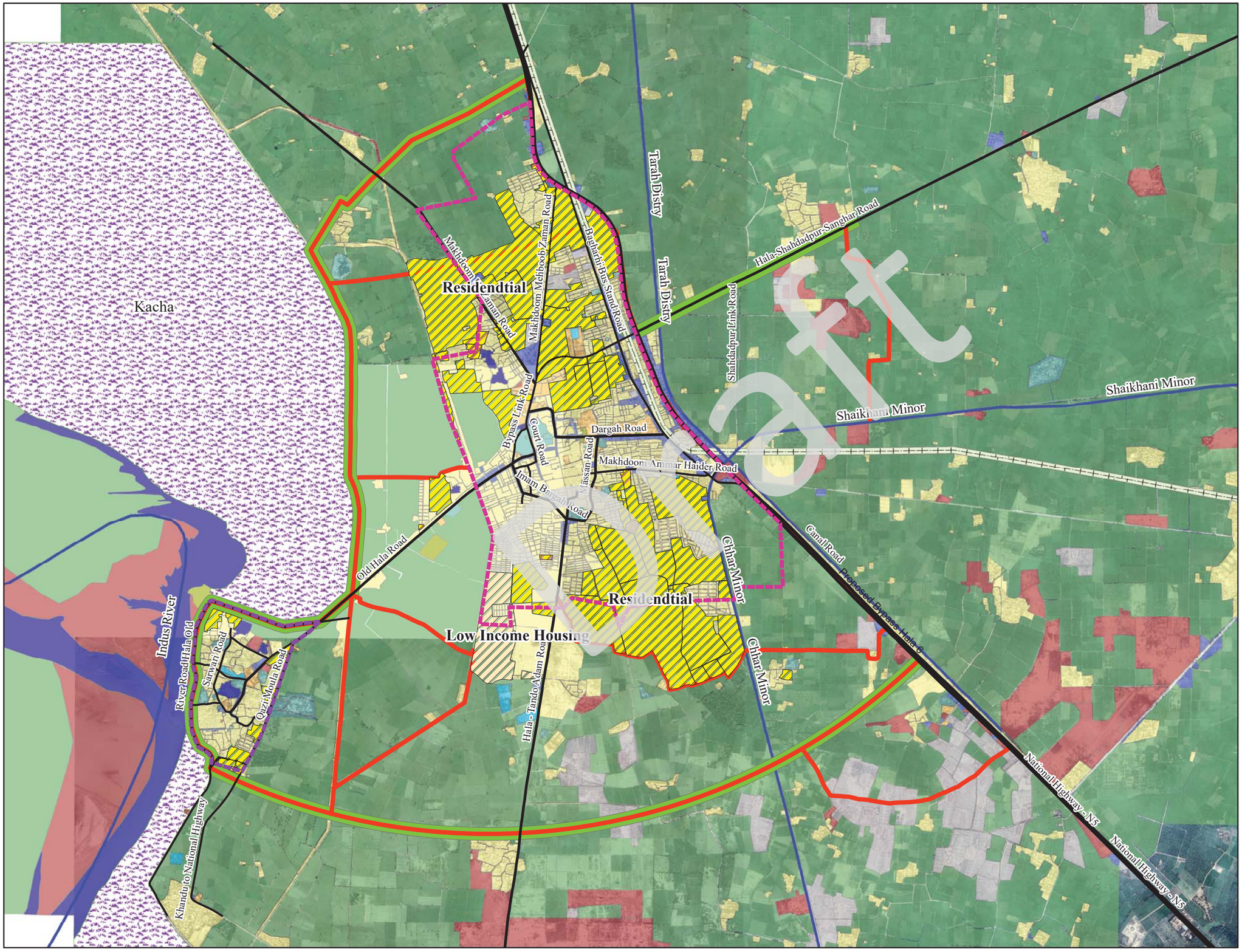

Legend

- Major Road
- National Highway - N5
- Major Road
- Minor Road
- Proposed Bypass
- Proposed Road
- Abandoned Railway Line
- Canal
- Kacha Area
- Proposed Residential
- Low-income housing
- MC Hala
- TC Old Hala

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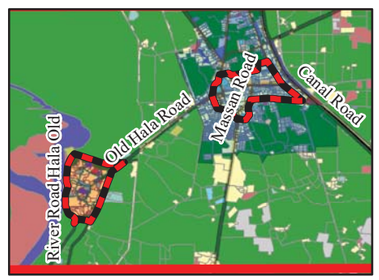

6. SOCIAL INFRASTRUCTURE

6.1 Education

6.1.1 Existing Situation[29]

Hala City faces significant challenges in its education sector, characterized by a parallel education system comprising public and private institutions, alongside donor-led initiatives, which creates disparities in income and educational quality, resulting in unequal access to quality education. While some schools, such as GBPS Makhdoom Moula Bux (Campus) Hala New and GBLSS, Mehmood Thaheem, have stable infrastructure, others like GBPS Abdul Rahim Arbab, face severe infrastructure deficts, contributing to higher dropout rates. Primary schools for both boys and girls encounter infrastructure and resource.

- **Primary Schools**
  Hala's primary schools demonstrate significant variations in infrastructure and service quality between girls' and boys' institutions.
  i. **Primary Schools for Girls & Co-Education):** A review of thirteen government schools shows a combined enrolment of 2,147 students across 64 classrooms, supported by 99 teachers. The average class size is manageable; however, disparities in facilities are stark. Furniture is often in poor condition, limiting classroom functionality. Toilets, water/sewerage, and electricity are available across most schools. Despite these gaps, dropout rates are low, reflecting relatively strong retention.

  ii. **Primary Schools for Boys:** seventeen primary boy's schools we cater to 6,040 students with 117 classrooms and 274 teachers, averaging 51 students per room and a favorable teacher–student ratio of about 1:22. Facilities such as playgrounds, libraries, and laboratories are inconsistent, with many schools lacking these entirely. The average drop-out ratio is 2%, but certain schools report higher attrition, highlighting inequities in learning conditions.

- **Middle Schools**
  Hala's seven government middle schools (girls and co-educational, and Boys) enroll 2,632 students across 56 classrooms. Class sizes average about 47 students per room. While basic utilities (toilets, water, electricity) are generally available, most buildings need repairs and furniture is often only in "satisfactory" condition. None of the schools have functional libraries or laboratories. Drop-out ratios remain between 3% and 5%, signaling retention challenges at the transition stage.

[29] *Sindh Education Profile 2016-2017*

- **High Schools**

  Girls High Schools: Four institutions enroll 2,712 students with 32 classrooms and 94 teachers. While utilities such as toilets and electricity are available, facilities such as libraries and laboratories are missing in some schools. Furniture is satisfactory, and playgrounds are available in all of the four schools. Drop-out ratios average 1%, reflecting relatively strong retention.

  Two boys' schools account for 2,587 students with 36 classrooms and 132 teachers, averaging a teacher–student ratio of 1:20. GBHS MG Hala New alone serves over 2,000 students, while GBHD MMZ Hala-II serves 350 students. Building and furniture conditions across all two schools are marked "Satisfactory". Facilities such as toilets, electricity, library and laboratory are available in only one school. Despite these constraints, drop-out ratios remain relatively low (1.5%), suggesting community demand is strong even under weak infrastructure.

- **Colleges and Higher Education**

Hala hosts four major colleges:

I. **Government Degree college Hala** with **1,250 students** and 17 classrooms, where infrastructure and furniture require repair. It lacks a Laboratory but provides essential utilities, library, and playground.
II. **Government S.I.D College Hala** with **1,882 students** and 9 classrooms, also requiring building and furniture repairs, though it provides playgrounds and library.

At tertiary level two colleges **Makhdoom Muhammad Zaman talib ul Moula Government Law College** is a medium-sized institution with 285 students utilizing 6 classrooms, giving a comfortable average student capacity per room of 48. It employs 11 teachers. The building and furniture are in good condition, and a full suite of facilities, including playground, toilets, water, electricity, and library, are available to students. However, the absence of a laboratory is noted, and the student dropout ratio is relatively high at 20%. And the second one is **I.T. College Hala** is the smallest, with 30 students in 4 classrooms, resulting in a very low student capacity per room of 8, which should allow for highly personalized education. The college has 11 teachers, indicating a strong teacher-to-student ratio. The condition of the building is satisfactory, and the furniture is new. The playground is partially available, and there are 6 toilets. While water and library facilities are available, there is no electricity or laboratory, and the student dropout ratio stands at nil.

Given the quantified classroom deficits, deteriorated infrastructure, inconsistent WASH/electricity, and limited vocational pathways, the education strategy must prioritize:

I. Rehabilitation and safety upgrades of existing institutions;
II. Classroom expansion to reduce overcrowding against NRM standards;
III. Provision of allied facilities (WASH, electricity, boundary wall, labs/libraries, playgrounds) with inclusion features; and
IV. Strengthening of technical/vocational training aligned with local employment needs.

6.1.2 Issues

In Hala City, several education-related issues are identified based on the comprehensive overview of the education sector provided:

- Parallel Education System: the coexistence of public and private sector education, along with donor-led projects, creates disparities in income and education quality. This dual system results in unequal access to quality education.
- Infrastructure Challenges in Primary Schools: For both boys and girls, schools in Hala face infrastructure challenges. Many buildings require repairs, and essential facilities like water, sewerage, and playgrounds are lacking. Additionally, the absence of libraries and laboratories indicates a gap in educational resources.
- Accessibility and affordability Issues: Financial constraints, geographical barriers, and the unavailability and affordability of education varies across different levels, with primary and university education perceived as less affordable.
- Limited Facilities for Persons with Different Abilities (PWD): A significant portion of the population believes that educational facilities for PWD are inadequate, highlighting a gap in inclusive education.
- Preference for Government/Public Educational Institutions: A majority of respondents prefer or are satisfied with government/public educational institutions, though private institutions also have a considerable preference.
- Need for Separate Schools for Boys and Girls: While many report the presence of separate schools for boys and girls, a notable percentage indicates their absence, suggesting a need for gender-specific educational facilities.
- Appropriate Number of Teachers and Gender Diversity: Most educational institutions reportedly have an appropriate number of teachers, but there is a gender imbalance in the teaching staff, with a lower representation of female educators.

6.1.3 SWOT Analysis of Education and Literacy of Hala

Education & Literacy			
Strength	**Weakness**	**Opportunity**	**Threats**
1. High demand rate for private schooling educational system **2.** Availability of Teachers	1. A significant number of schools and colleges require repairs 2. Un-availability of play grounds within school buildings. 3. Lack of facilities for person with different abled (PWD). 4. Unawareness of modern teaching techniques. 5. 60% faced affordability challenges as a significant barrier. 6. The absence of infrastructure development and maintenance a significant challenge.	1. There is an opportunity for government bodies, NGOs, and other stakeholders to invest in infrastructure development projects aimed at improving educational facilities in the city. 2. Collaboration and partnerships. 3. Incorporating technology in education can mitigate some infrastructure challenges, such as providing digital resources in lieu of physical libraries. 4. Education services mark steady growth in urbanization process. 5. Infrastructure improvement to ensure an optimal learning environment for the students.	1. Affordability challenges. 2. Low literacy rate. 3. Overcrowding of students in classrooms. 4. Inadequate funding.

6.1.4 Need Assessment

I. Current Scenario 2025

The education Need Assessment of Hala City for 2025, based on the National Reference Manual (NRM) standards, highlights a considerable need for infrastructural development in the education sector to achieve the recommended student capacity of 30 per classroom. At the primary school level, the existing infrastructure falls significantly short of the requirements. With an enrollment of 8,187 students and only 181 classrooms, each classroom is currently accommodating an average of 45 students. The current teacher-student ratio is 22, and to meet the NRM standards, there is a pressing need for an additional 92 classrooms.

The situation at the middle school level mirrors this challenge. The middle schools, catering to 2,632 students across 56 classrooms, are also dealing with overcrowding, with an average of 47 students per classroom. Although the teacher-student ratio here is 21, the infrastructure still requires an expansion of 32 additional classrooms to meet the NRM guidelines.

High schools in Hala City exhibit the most acute shortfall. Serving 5,299 students with only 56 classrooms results in a strikingly high average student capacity of 78 per room. Despite having a suitable teacher-student ratio that aligns with the NRM standard, the lack of classrooms is glaring. To address this, an additional 217 classrooms are necessary.

Colleges in Hala City exhibit the most acute shortfall. Serving 3,447 students with only 28 classrooms resulting in a strikingly high average student capacity of 123 per room. Despite having a suitable teacher-student ratio that aligns with the NRM standard, the lack of classrooms is glaring. To address this, an additional 158 classrooms are necessary.

Overall, the assessment underscores the urgent need for infrastructural development across all educational levels in Hala City. The primary goal should be constructing new classrooms to reduce the student capacity per room, aligning with the NRM standards, and ensuring a conducive learning environment. This expansion is crucial not only for accommodating the growing student population but also for enhancing the overall quality of education in the city.

Table 6-1: Need assessment class room of Hala City 2025

Education Level	Enrollment	Classrooms	Student Capacity per Room	Number Of Teachers	Teacher-Student Ratio	Actual Room required	Attainment	2025 Required class room	Additional Required classroom
Primary School	**8,187**	**181**	**45**	**373**	**22**	**273**	**11,557**	**385**	**204**
Middle School	**2,632**	**56**	**47**	**123**	**21**	**88**	**10,396**	**347**	**291**
High School	**5,299**	**68**	**78**	**226**	**23**	**177**	**10,073**	**336**	**268**
College	**3,447**	**28**	**123**	**66**	**52**	**115**	**8,429**	**211**	**183**

As per NRM (National Reference Manual) recommended students per class room occupancy is 30 students per class room

II. Future Assessment (2045)

In anticipation of the growing educational needs of Hala City in 2045, a comprehensive future needs assessment was conducted. The assessment took into account factors such as population growth, enrolment patterns, and the desired level of attainment, presuming that 50% of students would opt for private schools. The outcomes indicate a significant surge in the demand for classrooms across all education levels.

Specifically, there is a projected need for an additional 507 classrooms in Primary Schools, 563 classrooms in Middle Schools, 532 classrooms in High Schools, and 348 classrooms in colleges. These findings underscore the imperative for strategic planning and substantial investment in educational infrastructure to accommodate the anticipated educational needs of Hala City in the future.

Table 6-2: Need Assessment Class Room of Hala City 2045

Education Level	Total No of Institution	Enrollment	Classrooms	Student Capacity per Room	Number of Teachers	Teacher Student Ratio	Actual Room Required	Attainment	2045 Required Classroom	Additional Required Classroom
Primary School	30	8,187	181	45	373	22	273	**20,648**	**688**	**507**
Middle School	7	2,632	56	47	123	21	88	**18,573**	**619**	**563**
High School	6	5,299	68	78	226	23	177	**17,997**	**600**	**532**
College	4	3,447	28	123	66	52	115	**15,059**	**376**	**348**

The need assessment confirms that the education response cannot rely on new construction alone; it must be delivered through a two-track approach: (i) Rehabilitation and functional upgrading of existing institutions (safety, WASH, electricity, boundary/security, furniture), and (ii) targeted classroom additions to reduce overcrowding in priority levels/locations. This phased approach supports both immediate service continuity and long-term attainment targets.

6.1.5 Policy Guidelines[30]

- Development of Teachers and professional substitutes;
- Construct required schools and higher education institutions in all districts. Take stock of operational and staffed schools and eliminate ghost schools.
- Launch a rural education program.
- Ghost Schools and absentee teacher should be identified and removed.
- Maintenance of existing depilated schools and buildings should be given top priority.
- For girl's literacy and women education, informal system of homeschool may be encouraged.

6.1.6 Strategic Development Plan

This Strategic Development Plan aims to strengthen existing schools' system to bring socio-economic and sustainable development in the region. The focus of this plan is centered chiefly on improving education standard at primary and secondary levels and providing extra curriculum opportunities to address the needs of youth in rural and remote areas. This will increase the literacy ratio, living standard, employment opportunities of the future population.

i. Long Term Plan

- Increasing equitable access to quality ECE, primary and secondary education
- Improving the quality of learning outcomes through strengthening the teaching/learning process, improving the quality of teachers through merit-based selection and recruitment; improved accountability, and establishing a competency-based constructivist system of educational professional development.
- Enhancing the equity of resource allocation and improving the fiscal sustainability and effectiveness of educational expenditure, thereby fostering transparency and accountability in the use of public resources.
- Sindh Technical and Vocational Training authority (STEVTA) is providing the technical education to the people of Sindh for increasing their technical Skills. In Hala, the peoples are significantly deficit in technical skills. By implementation of this project, people will enhance their technical skills and it also increase the employment status of the city.

ii. Short Term Plan

- Rehabilitations of Schools and Colleges with allied infrastructure
- MC to take over all site provided for schools in the new housing schemes to eliminate the chances of misuse and encroachment.
- Training programme for teachers to increase capacity building
- Vocational and skill training centers in alliance with contemporary demand

[30] Sindh Vision 2030

Education interventions will be integrated with municipal infrastructure planning, particularly drainage access, road connectivity, WASH services, solid waste management, energy reliability, and public safety around schools. This integration will be reducing disruption during flood/rain events and strengthen service continuity.

6.1.7 Priority Projects

➢ EXTENSION AND REHABILITATION OF SCHOOLS AND ALLIED INFRASTRUCTURE

The education sector in Hala city faces severe infrastructure and capacity challenges. Many schools operate in unsafe or deteriorated buildings, lack essential facilities, or are overcrowded. According to the secondary data and need assessment, urgent rehabilitaion and additional classrooms are required, particularly in primary schools. Without timely intervention, student-classroom ratios will remain above the **NRM standard of 30:1,** further underminig learning outcomes.

Education is a vital component in realizing the objectives of any urban strategy. Currently, the state of primary education in Hala City is inadequate, necessitating the establishment of additional schools to address the classroom shortage at both the middle and tertiary levels. It is imperative to enhance infrastructure and provide essential facilities, including water supply, electricity, sanitation, and playgrounds. Projections indicate a requirement for an additional 26 classrooms in primary schools, 2 classrooms in middle schools, and 22 classrooms in colleges. To meet this increasing demand, it is essential that these classrooms be constructed by the year 2045.

➢ Scope

- Rehabilitation of Existing Infrastructure: Structural repairs of classrooms, roofs, toilets, boundary walls, electrical and water supply systems.
- Classroom Expansion: Construction of additional classrooms to meet NRM-recommended students-teacher ratio of 30:1.
- Access to Essential Educational Facilities: Development of science labs, libraries, and IT learning spaces in targeted in high schools.
- Inclusive learning Features: Installation of ramps, accessible toilets, and safety enhancements for all learners including children with disabilities.
- Service Upgradation: Provision of clean drinking water, sanitation systems, playgrounds, and improved access roads where mecessary.

➢ Size

- ~28 new classrooms planned to reduce overcrowding and improve educational access.
- More than 1500 beneficiaries, including students, teachers, and parents who directly gain from imporved learning environments.
- Focused support to primary schools with highest infrastructure deficits.
- Comperehensive upgrades covering building rehabilitation, service improvements, and educational facility enhancements.

➢ SDG's Alignment

I. **Goal 4 – Quality Education (4.1, 4.a):** Ensure inclusive and equitable quality education and safe, effective learning environments

II. **Goal 6 – Clean Water and Sanitation (6.1,6.2):** provide access to clean water and functional sanitation in schools

III. **Goal 11 – Sustainable Cities and Communities (11.7):** Promote inclusive, safe, and accessible public infrastructure.

- **Implementing Authority:** Department of Education, Provincial Government, District Government and New Hala Municiple Committee and Old Hala Town Committee

- **Preliminary Cost estimate**
  Estimated Cost: 800 Million PKR Approx.

S. No.	Project Name	Estimated Cost in Millions	ADP	Non ADP	Status	
					Short Term	Long Term
Education						
1	Addition of classrooms in existing school and college buildings along with allied facilities with basic utilities.	500	-	Non ADP	**Short Term**	-
2	Training programme for teachers to increase capacity building	100	-	Non ADP	**Short Term**	-
3	Vocational and skill training centers for male and female	200	-	Non ADP	**Short Term**	-

6.1.8 Immediate action plan for core urban area

- **EDUCATION**

- **Improvement of Education in Core Urban Areas**

Schools in the core urban areas of Hala MC and TC, including Government Girls Primary School Hala Old and Government Girls Primary School Mullan Sawani, face deteriorating facilities that compromise student safety and hinder learning. Overcrowded classrooms, poor infrastructure, and outdated facilities highlight the urgent need for rehabilitation.

To improve educational outcomes, the Immediate Action Plan focuses on rehabilitation and systemic upgrades that create a safe, inclusive, and effective learning environment. This aligns with SDG 4 (Quality Education), especially SDG 4.1 (universal access to primary and secondary education) and SDG 4.4 (skills for employment and entrepreneurship).

GGHS Hala New

Makhdoom Ameen Faheem Primary Masjid School

Immediate action plan to help improve the education situation of the core urban areas and needs quick action. Therefore, rehabilitation of the educational institutions will be implemented in the core urban area of Hala MC and TC which include the following measures:

I. Scope

The IAP for education includes the following targeted measures:

- **Infrastructure Upgradation:** Expansion of existing schools by adding classrooms and facilities through new blocks or additional floors.
- **Rehabilitation of Existing Facilities:** Repair of classrooms, roofs, sanitation, and utility systems main gate and boundary wall in priority schools like Government Girls Primary School Hala Old and Government Girls Primary School Mullan Sawani
- **Technology Integration:** Establishment of library at both schools, smart classrooms, and digital learning tools.
- **Community & Stakeholder Engagement:** Active involvement of parents, teachers, and NGOs to ensure solutions reflect community needs.

II. Size:

The rehabilitation and upgradation of building and furniture will focus on three priority educational institutions located within the core urban area of the Hala MC and TC. Collectively, these schools occupy approximately 0.6 acres.

A **condition assessment** was conducted to identify infrastructure gaps and prioritize investment needs. The assessment provides a concise overview of enrollment pressure, classroom conditions, building deterioration, sanitation issues, furniture needs, and availability of essential services.

S.No	Name of School	Enrollment	Class Room	Student Capacity per Room	No. of Teachers	Condition of Building	Condition of Furniture	Playground available	Toilets	Water/ Sewerage	Electricity / Power Available	Library	Laboratory
1	GGPS Hala Old	200	5	40	14	Poor	Poor	No	2	Yes	Yes	-	-
2	GGPS Mullan Sawani	64	2	32	3	Poor	Fair	Yes	2	Yes	Yes	-	-

Target Institutions:

- Government Girls Primary School Hala Old- 0.25 acres
- Government Girls Primary School Mullan Sawani- 0.35 acres

S.No	Education Facility Name	Area (sft)	Repair & Rehabilitation – Activity Wise Cost in Millions	
			Cost (Million)	Utilities & Security Cost
1	GGPS Akhund Mallan Sanwani Hala Old	15,246	70	20
2	GGPS Hala Old	10,890	45	15
Total		15,681	115	35
Total PKR Rs. Million			150	

III. Preliminary cost estimate: 150 million

IV. Implementation Framework

- **Funding:** To be mobilized through municipal allocations, provincial ADP funds, and external development support.
- **Execution:** Works will be phased, starting with the schools in most urgent need.
- **Monitoring & Evaluation:** KPIs will include number of classrooms rehabilitated, student-teacher ratios improved, and successful technology integration.

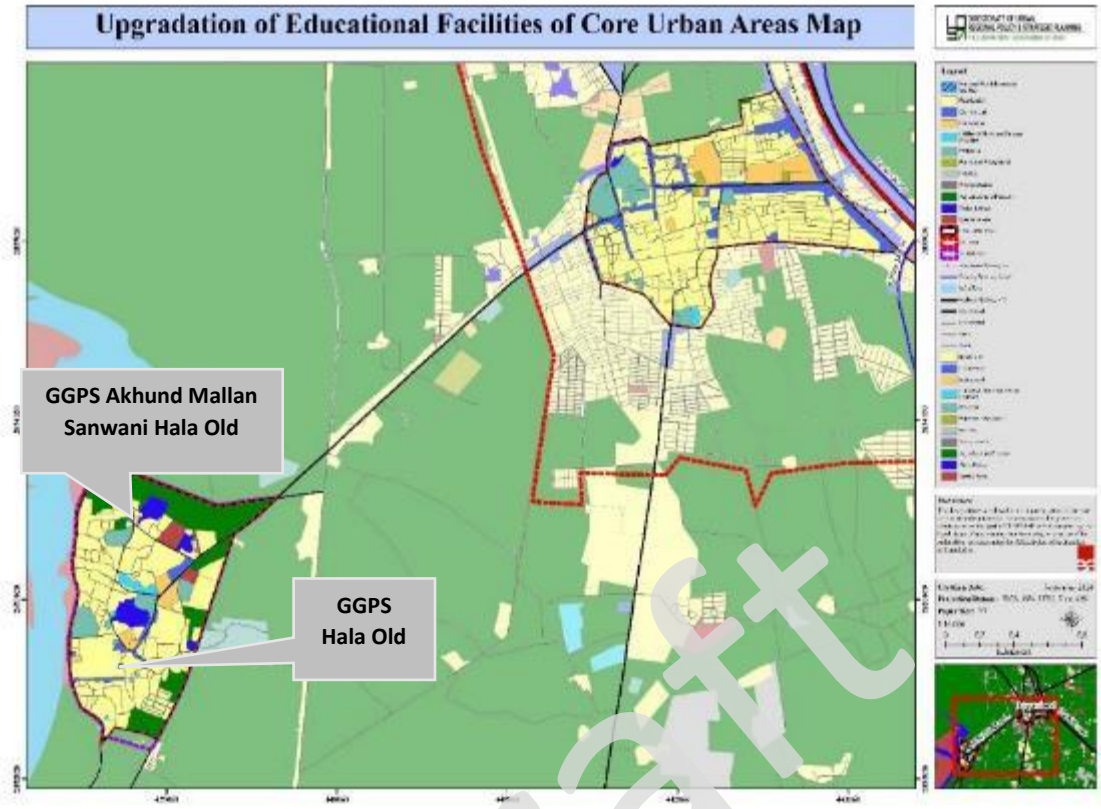

Figure 6-1: Upgradation of Educational Facilities of Core Urban Areas Map

Upgradation of Educational Facilities of Core Urban Areas Map

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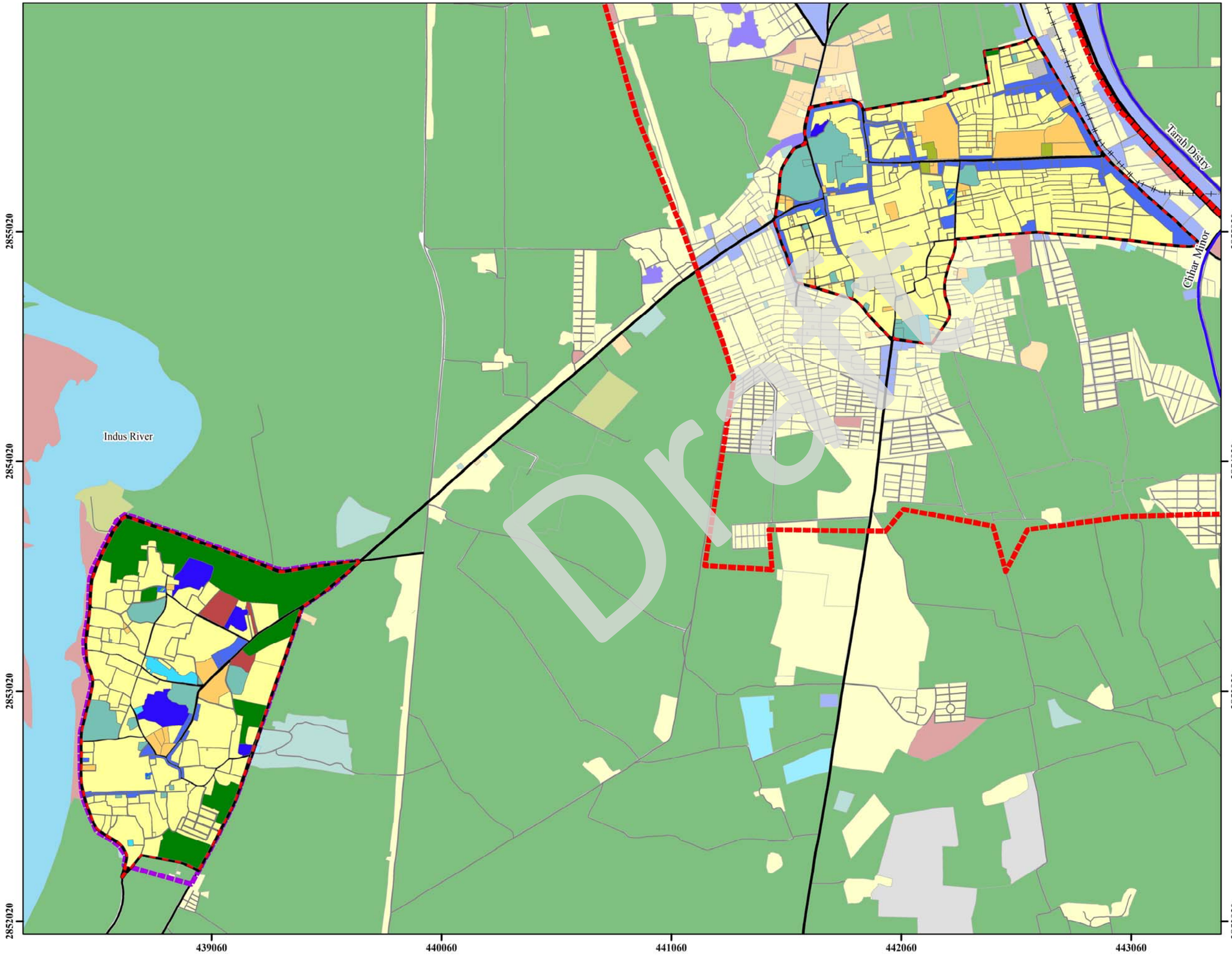

Legend

- Proposal For Educational facilities
- Residential
- Commercial
- Institutional
- Utilities & Municipal Service Facilities
- Religious
- Parks and Playground
- Industry
- Transportation
- Agriculture and Forestry
- Water Bodies
- Special Areas
- Core Urban Area
- MC Hala
- TC Old Hala
- Abandoned Railwayline
- Existing Waterway Canal
- Indus River
- National Highway - N5
- Major Road
- Minor Road
- Street
- Track
- Residential
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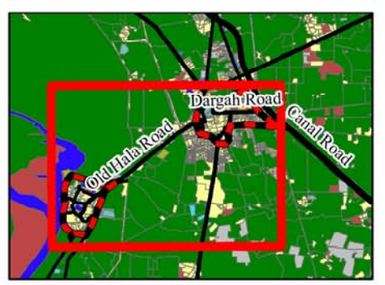

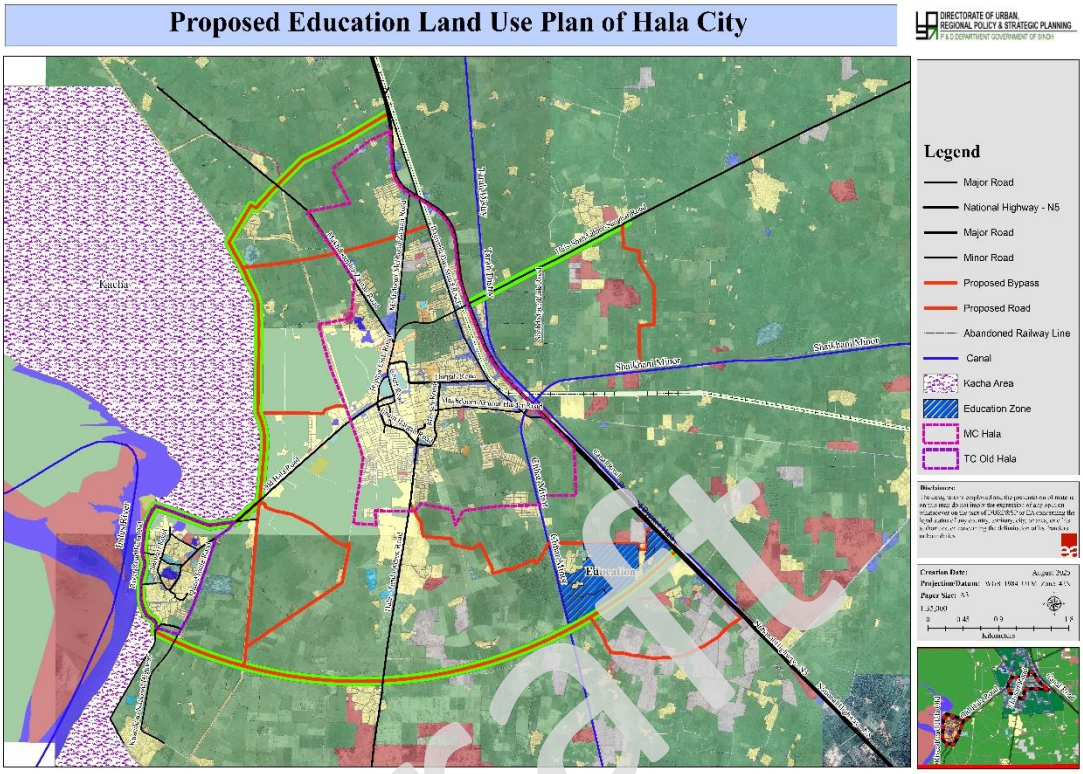

Figure 6-2 Proposed Educational land use for Hala City

Proposed Education Land Use Plan of Hala City

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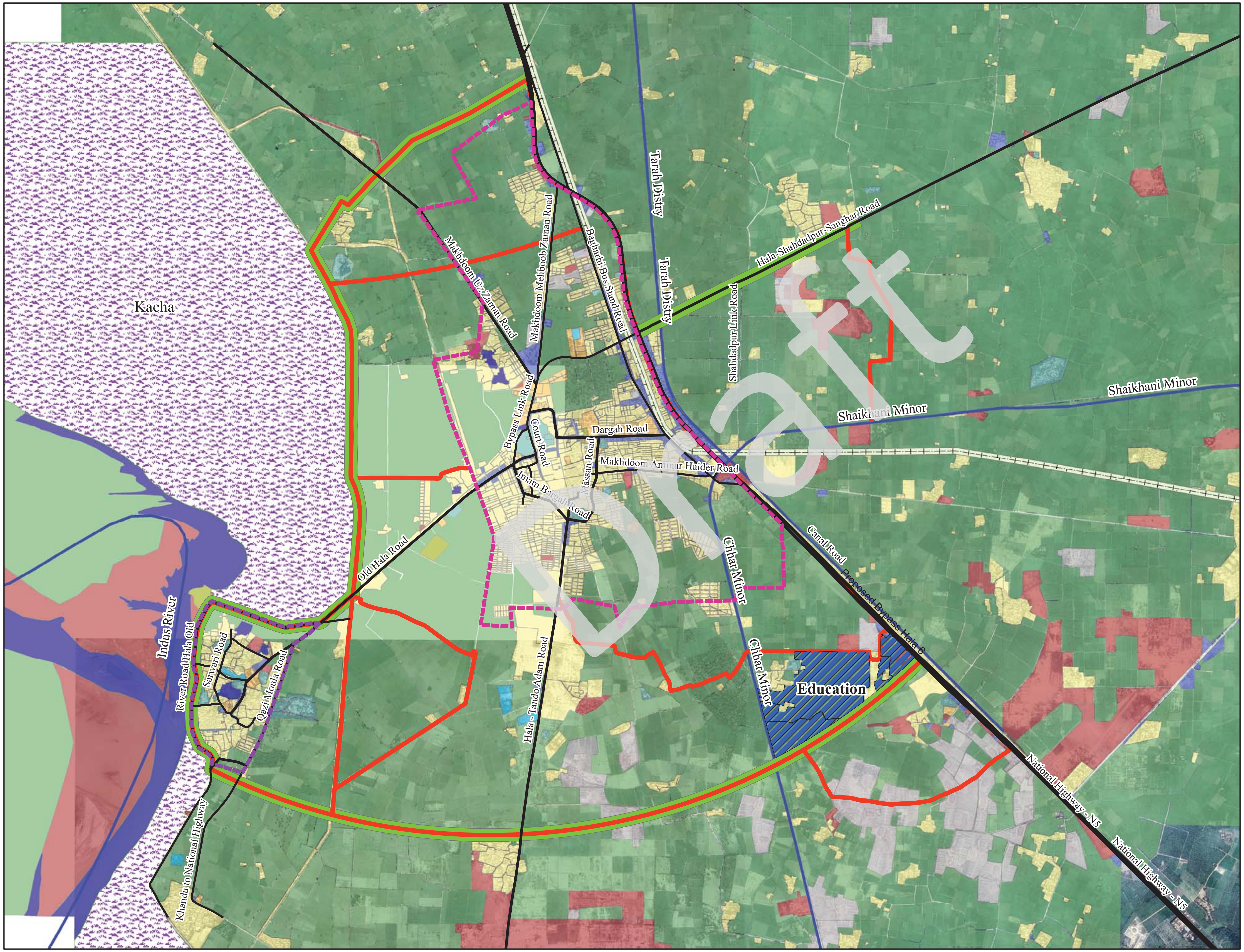

Legend

- Major Road
- National Highway - N5
- Major Road
- Minor Road
- Proposed Bypass
- Proposed Road
- Abandoned Railway Line
- Canal
- Kacha Area
- Education Zone
- MC Hala
- TC Old Hala

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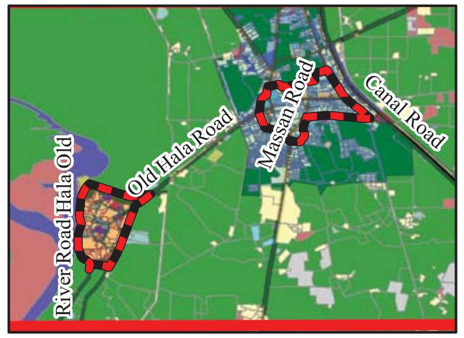


6.2 Health

6.2.1 Existing Situation

Sindh, is home to a predominantly youthful population, with a growing percentage in the working-age bracket. While the region has shown some progress in child health and maternal healthcare indicators, there are notable disparities in access to healthcare services, depending on factors like district, economic status, education, and rural/urban residence. Low contraceptive usage, inadequate healthcare infrastructure and quality in rural areas, and obstacles faced by women when accessing healthcare, such as financial constraints and societal norms, are among the important challenges. Moreover, the devastating floods in 2022 have inflicted significant damage on the health system in Sindh. Hundreds of healthcare facilities are damaged or inoperable, making healthcare inaccessible. As a result, diseases like malaria, dengue, diarrhea, cholera, skin diseases, and malnutrition are on the rise, posing additional burdens on an already stretched healthcare system.[31]

Table 6-3: Government and private departmental with bed capacity in district Matiari

Items	Medical Centers	Beds
BASIC HEALTH UNITS (BHUS)	21	42
RURAL HEALTH CENTERS (RHCS)	4	52
DISPENSARIES	71	24
GOVERNMENT	13	24
SEMI GOVERNMENT	0	0
LOCAL BODIES	38	0
PRIVATE	20	0
TB CLINICS	7	0
GOVERNMENT	7	0
SEMI-GOVERNMENT	0	0
PRIVATE	3	0
MOTHER AND CHILD HEALTH CENTERS (MCHC)	1	0
GOVERNMENT	0	0
SEMI-GOVERNMENT	2	0
LOCAL BODIES	0	0
PRIVATE	1	NA
MATERNITY HOMES (GOVERNMENT)	21	42

6.2.2 Existing Situation of District Matiari

There are 21 BHUs in the district, equipped with a total of 42 beds, which are crucial for delivering primary healthcare, especially in rural areas. Additionally, the district has 4 RHCs that offer 52 beds, serving as important healthcare providers in remote locations. Dispensaries are the most numerous, with 71 across the district, but only the 13 government-operated ones offer a total of 24 beds. Local bodies manage 38 dispensaries, and the private sector operates 20, but neither provides inpatient bed facilities.

[31] Factsheet: Sindh Integrated Health and Population Project (worldbank.org)

6.2.3 Health Sector at Hala City[32]

The healthcare sector in Hala City is primarily cantered on the Taluka Hospital (THQ), which provides essential services with a 50-bed capacity, including two each of X-ray units, wards, laboratories, and operating theatres. However, there is a significant shortfall in medical staff, with only 48 of the sanctioned 77 doctors available, and a limited range of specialties covered by one surgeon, one gynaecologist, and one paediatrician, while several specialist positions remain vacant. The nursing staff comprises six nurses and seven dispensers, supported by 11 ward boys and 10 sweepers, but lacks electricians and has only one lab attendant. The hospital's diagnostic capabilities are hindered by outdated equipment, necessitating modern facilities such as a Digital X-Ray, MRI machine, and oxygen plant, alongside the establishment of specialized departments like Neurology and Nephrology.

Based on the existing health services, shortage of medical staff, lack of wards, laboratories and operating theatres, the health strategy for Hala must prioritize (i) Extension of THQ for more specialized wards/sections (ii) provision of mobile health unit for the peripheral area of Hala City (iii) Provision of diagnostic facilities, ambulance, pharmacy in THQ.

6.2.4 Issues

The health sector in Hala City faces several critical issues and challenges that require urgent attention:

- The availability of hospital beds is insufficient compared to the recommended standards, leading to overcrowding and challenges in patient care.
- Many essential medical positions, including doctors and medical staff, remain vacant within healthcare institutions, affecting service delivery.
- There is a lack of proper training opportunities and housing facilities for medical and paramedical staff, impacting their morale and performance.
- Essential healthcare facilities such as wards, laboratories, and operating theatres are lacking in both quantity and quality.
- The health sector faces challenges in acquiring and maintaining diagnostic equipment, which affects the accuracy and efficiency of patient care.
- The means to transfer critically ill patients from rural areas to hospitals are insufficient and often inefficient.
- Chronic financial constraints limit the sector's ability to improve infrastructure and provide essential healthcare services.
- There is a pressing need for capacity-building initiatives to enhance the overall performance of healthcare institutions.
- The existing THQ hospital building is aging and requires renovation to meet modern healthcare standards.

[32] Secondary data collection proforma

6.2.5 SWOT Analysis of Hala City Health Sector

Health			
Strength	**Weakness**	**Opportunity**	**Threats**
1. Specialized Medical Team 2. Availability of wide range of essential services in THQ such as X-Ray facilities, well-equipped wards, a laboratory, and fully functional operating theater (O.T) 3. Diverse healthcare landscape including various private institutions.	1. Lack of specialized and Emergency (SNE), Neurology, and a dedicated SNE Trauma Centre. 2. Vacancies in essential medical positions result in service delivery challenges 3. Lack of proper training opportunities and housing facilities affects staff morale and performance. 4. Challenges in acquiring and maintaining diagnostic equipment affect the accuracy and efficiency of patient care.	1. More investment is required through PPP in health sector 2. Providing training and development opportunities for existing staff can enhance their skills and capabilities, improving the overall quality of healthcare services provided by the hospital. 3. More job opportunities for specialized doctors. 4. Free medical camp for the out reached people. 5. Community outreach programs.	1. Insufficient hospital bed availability may cause overcrowding and hinder timely medical care, thereby compromising patient outcomes and overall healthcare quality. 2. Insufficient allocation of resources toward emergency responses to health incidents. 3. Chronic financial constraints may hinder the sectos's ability to adapt and innovate. 4. Failure to renovate aging infrastructure could compromise patient safety and satisfaction, impacting the overall reputation of healthcare institutions.

6.2.6 Present Need Assessment Hala City 2025 (Population, Bed Ratio)

The present Need Assessment for Hala City in 2025 sheds light on the healthcare infrastructure needs in relation to the city's population. As of 2025, the city has population of 88,463 residents. However, the healthcare facilities in Hala City are currently facing a shortage in both bed capacity and medical staff.

In terms of bed availability, there are only 98 beds available in the city's healthcare facilities. Given the population size, the assessment indicates that there is need for 177 beds. This presents a significant shortfall, as the city requires an additional 79 beds to meet the healthcare needs of its residents adequately.

The shortage extends to medical personnel as well. Currently, there are 48 doctors available in Hala City. However, the assessment suggests that to provide proper medical care to the population, the city needs a total of 88 doctors. This means there is a deficit of 40 doctors, highlighting a critical need for more medical professionals in the city.

The Present Need Assessment for 2025 clearly points to a pressing requirement for substantial investment in Hala City's healthcare infrastructure. Addressing the gaps in bed capacity and medical staffing is crucial for improving healthcare services. Ensuring that residents have adequate access to medical care involves not only increasing the number of hospital beds but also recruiting a significant number of additional medical professionals. The focus should be on enhancing the healthcare facilities to cater effectively to the growing needs of Hala City's population.

Table 6-4: Present Assessment of Hala City - 2025

Present Population	Available Beds	Present need	Required Beds	Available Doctors	Present Need	Required Doctors
88,463	98	79	177	48	40	88

6.2.7 Future Need Assessment (Population, Bed Ratio) 2045

For the purpose of future need assessment, it is pertinent to consider the entire city's catchment population. The National Reference Manual (NRM) recommends a medium-term target of 2 beds per one thousand population. Based on this standard, an estimated 218 beds will be gradually required until the year 2045 to meet the city's healthcare needs.

Additionally, in line with the World Health Organization (WHO) standards, the ideal doctor-to-population ratio is 1:1,000. Using this guideline, the future requirement for doctors is calculated at 110 to adequately serve the healthcare needs of the growing population in Hala City.

Table 6-5: Future Health Need at Hala City - 2045

Future Health Need Assessment at Hala City till 2045						
Future Population (2045)	**Available Beds**	**Future Need**	**Required Beds**	**Available Doctors**	**Future Need of Doctors**	**Required Doctors**
158,052	98	218	316	48	110	158

Thus, by the year 2045, Hala City, with a projected population of 158,052, will require a total of 316 hospital beds, against the existing 98 beds, indicating an additional requirement of 218 beds. Similarly, the future requirement of doctors is estimated at 158, compared to the currently available 48 doctors, resulting in an additional need for 110 doctors. Addressing this gap will require not only the expansion of physical health infrastructure but also strengthening of human resources, service delivery capacity, and access to healthcare facilities.

6.2.8 Policy Guidelines[33]

- Enhance basic health care by making it more accessible & affordable, efficient, effective and timely. This will be achieved by diversifying outlets through the involvement and support of other organizations that provide health or health related services.
- Regulate protection from disease and the quality of healthcare across the province.
- Protect people against pollutions of all forms and types, and infectious diseases by promoting public health and by upgrading curative care facilities.
- Enhance and improve existing emergency care facilities and trauma centers, including ambulatory services and paramedic forces.

6.2.9 Strategic Development Plan

i. Long Term

- Provision of Mobile Health Unit for the peripheral area of Town (under supervision of taluka Hospital)
- Health awareness programme for the deprived population
- Research and development programme for doctors and paramedic's staff
- Provision of diagnostic facilities, ambulance, pharmacy in all hospitals
- Accommodation facilities for Doctors and Paramedic Staff

ii. Short Term

- Improve access to healthcare facilities as due to long journeys to hospitals many patients die on the way.
- Ensure availability of adequate and skilled workforce to fulfill population health needs,

[33] Sindh Vision 2030

- Improving functionality of equipment and availability of quality medicines.
- Health is the fundamental need of the people. Currently health institutes of City are facing lot of problems due to unavailability of Laboratorial facilities. Shortage of Specialized doctors, surgical instruments, and lack of machinery are the major issues. There should need to be rehabilitation of these institutes to provide sufficient and high-quality health to the people of Hala.

6.2.10 Priority Projects

➢ **CONSTRUCTION / REHABILITATION OF HEALTH INSTITUTES WITH DIAGNOSTIC**

Health is basic necessity, yet the health facilities in Hala are facing serious challenges. Key problems include the lack of modern diagnostic and laboratory services, a shortage of specialist doctors, especially female doctors and staff, inadequate surgical tools, and outdated medical equipment. The condition of the Taluka Headquarters (THQ) Hospital is particularly poor, which severely affects its ability to offer quality care. To ensure accessible and effective medical services for the residents of Hala, it is crucial to upgrade and expand the current healthcare infrastructure with modern diagnostic tools and equipment.

➢ **Project Benefits:**

- Rehabilitation of Existing infrastructure: Repair and upgrading of hospital buildings, wards, emergency rooms, and maternity facilities.
- Diagnostic & Treatment Enhancements: Installation of essential laboratory equipment, X-ray, ultrasound, and other modern diagnostic systems.
- Medical Equipment upgradation: Provision of surgical instruments, life-saving machines, and essential hospital supplies.
- Human Resource Strengthening: Recruitment of specialist doctors, especially female doctors and nurses, and additional paramedical staff.
- Medicine & Health Support Services: Availability of free or subsidized medicines and improved pharmacy and storage facilities.
- Patient-Centered Improvements: Upgrades in sanitation, waste disposal systems, security, power backup, and accessibility features.
- Establish new health facilities on both sides of the city to ensure equitable access and adequately serve the population residing across all areas.

➢ **Size**

The proposed intervention aims to enhance healthcare services across Hala through comprehensive, city-wide improvements. It includes the rehabilitation of key existing health facilities such as the THQ Hospital, maternity units, and basic health centers. Together, these upgrades and new developments will strengthen the overall healthcare capacity, offering improved diagnostic, emergency, and impatient services to better meet the need of the community.

The program will target the rehabilitation and expansion of the existing Taluka Headquarter (THQ) hospital, including the addition of new specialized wards, installation of modern diagnostic equipment, and deployment of mobile health services to peripheral settlements, thereby significantly enhancing health coverage for the entire urban and adjoining rural population of Hala.

- **SDG'S Alignment**

I. GOAL 3 – Good Health and well-Being Goal

This is the most directly impacted goal. Rehabilitation of health facilities and provision of modern diagnostic equipment, surgical tools, and specialist services will improve access to essential healthcare. Addressing the shortage of female doctors and staff will ensure gender-sensitive care, particularly in maternal and child health. This supports SDG 3.1, 3.2, 3.8, and 3.c, which aim to reduce maternal and child mortality, achieve universal health coverage, and increase the health workforce.

II. GOAL 8 – Decent work and economic growth

Rehabilitating and expanding healthcare services will create direct employment opportunities in the health sector. In the long term, healthier populations contribute to higher productivity and economic growth. This supports SDG 8.3 and 8.5, which focus on job creation and equal access to decent work.

- **Project list and Location**

Taluka Headquarters (THQ) Hospital, Hala – Short Term Priority Projects

1. **Extension of THQ for specialized wards and sections –** expansion of maternal, child health, and emergency wards.
2. **Provision of Mobile Health Unit –** to serve peripheral areas of Hala City, under supervision of THQ.
3. **Provision of diagnostic facilities, ambulances, and pharmacy –** equipping THQ with laboratory, imaging, ambulances, and an in-house pharmacy.

- **Implementing Authority**

Government of Sindh - Health Department

- **Preliminary Cost Estimate**

Estimated Cost: 700 million PKR Approx.

S. No.	Project Name	Estimated Cost In Millions	ADP	Non ADP	Status	
					Short Term	Long Term
Health						
1	Extension of THQ for more specialized wards /sections	300	-	Non ADP	**Short Term**	-
2	Provision of Mobile Health Unit for the peripheral area of Hala City (under supervision of THQ Hala)	200	-	Non ADP	**Short Term**	-
4	Provision of diagnostic facilities, ambulance, pharmacy in THQ.	200	-	Non ADP	**Short Term**	-

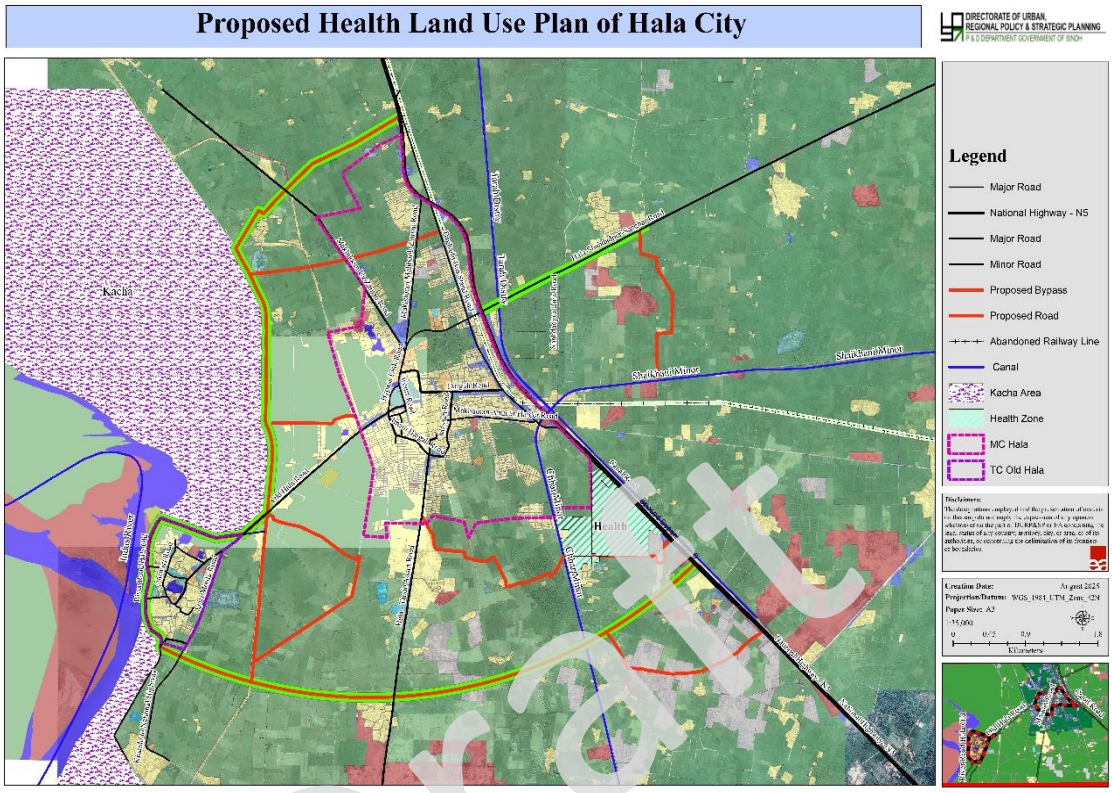
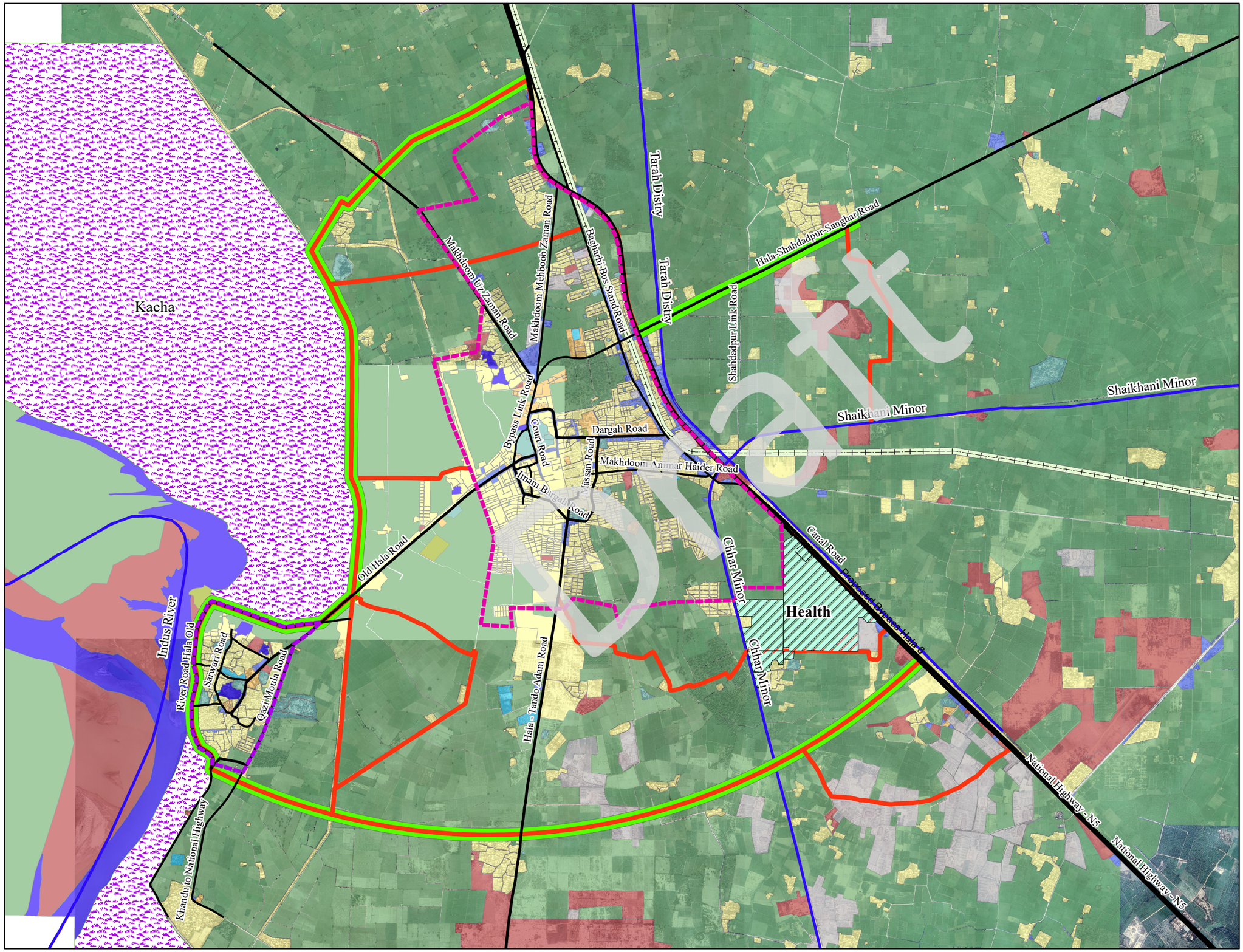


Figure 6-3 Proposed Health Land uses for Hala City

Proposed Health Land Use Plan of Hala City

DIRECTORATE OF URBAN, REGIONAL POLICY & STRATEGIC PLANNING
P & D DEPARTMENT GOVERNMENT OF SINDH



Legend

- Major Road
- National Highway - N5
- Major Road
- Minor Road
- Proposed Bypass
- Proposed Road
- Abandoned Railway Line
- Canal
- Kacha Area
- Health Zone
- MC Hala
- TC Old Hala

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The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of DURP&SP or EA concerning the legal status of any country, territory, city, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

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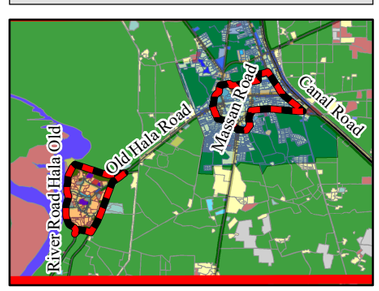
Kilometers



6.3 Recreational/Tourism/Culture

6.3.1 Existing Situation

Recreation and tourism play an important role in fostering the mental, physical and spiritual well-being of a community. Recreational activities can encompass both active pursuits, such as organized sports, and passive experiences, like enjoying the fresh air or relaxing in a beautifully landscaped park with friends and family. Amusement, as a concept, can be both a goal in itself and a subjective experience.
In Hala City, the recreational offerings are limited but significant. These include:

1. Mehran Paradise Point
2. Sarwari Park
3. Memon Sports Complex (under Construction)

Furthermore, Hala is home to the revered Shrine of Hazrat Makhdoom Sarwar Nooh, a spiritual site of immense importance. This shrine holds deep religious and cultural significance, attracting devotees and visitors alike. Its architectural beauty and serene ambiance contribute to Hala's potential for spiritual tourism and cultural exploration.

6.3.2 Issues

- Hala Town faces a scarcity of green spaces despite being a densely populated urban area.
- Limited recreational and park facilities negatively impact residents' well-being and outdoor activity opportunities.
- Existing parks are overcrowded due to uneven distribution across the town.
- Maintenance issues plague current parks, with overgrown vegetation, broken equipment, and poor sanitation.
- Basic Park amenities like benches, swings, slides, and fitness equipment are lacking.
- Public recreational spaces are limited, restricting leisure and physical activity for all age groups.
- Accessibility issues persist, with inadequate infrastructure for people with disabilities (e.g., missing ramps, broken pathways).

6.3.3 SWOT Analysis for Hala Sports & Recreation Sector

Strengths	Weakness	Opportunity	Threats
Sports & Recreation			
1. The presence of recreational spaces like Mehran Paradise Picnic Point, Sarwari Public Park, and the under-construction Memon Sports Complex provides vital venues for leisure, physical activities, and community gatherings. 2. Facilities such as cafes, separate toilets, air-conditioned spaces, and children's play areas enhance the appeal and functionality of recreational spots, catering to a broad demographic. 3. The design of recreational facilities, such as the round shaped building with a cone-shaped roof at Mehran Paradise Point, adds cultural and aesthetic value, promoting local architectural heritage.	1. Hala Town suffers from a scarcity of parks and green spaces, which limits recreational opportunities for residents and impacts overall urban livability. 2. Existing recreational facilities are often poorly maintained, with issues such as unkempt vegetation, broken equipment, and sanitation problems detracting from their usability and appeal. 3. The lack of basic amenities like benches, playground equipment, and fitness areas reduces the functionality of parks and recreational areas.	1. There is significant potential to develop and improve the existing park facilities and recreational areas, including better maintenance practices and the installation of modern, inclusive equipment. 2. Developing more parks and recreational areas can meet the increasing demand from the growing population, improving urban quality of life. 3. Organizing community events and recreational programs can maximize the utilization of these spaces, foster stronger community ties and promote healthier lifestyles.	1. Hala Town continues to expand, the pressure on existing green spaces may increase, potentially leading to their reduction or neglect unless properly managed. 2. Seasonal flooding and other environmental issues could damage recreational infrastructure and deter investment in new facilities. 3. If current issues such as lack of ramps and poorly maintained paths are not addressed, it could lead to increased exclusion, especially for people with disabilities, reducing the community-wide benefits of recreational spaces.

Strengths	Weakness	Opportunity	Threats
Culture			
1. The indigenous cultural activities of diverse social groups and minority communities encompass a multitude of events that draw attendees from their adjacent localities.	1. Poor Management for organizing cultural events 2. Lack of infrastructure to accommodate visitors into such events 3. Ethnic or cultural tensions within the city's diverse population might hinder cohesive cultural development efforts.	1. Investing in cultural tourism infrastructure such as heritage trails, interpretation centers, and cultural events can enhance visitor experiences and extend their stay in the city. 2. Digital platforms 3. Engaging local communities in cultural preservation efforts through participatory projects and initiatives can foster a sense of ownership and pride in their heritage	1. Security Threats 2. Demise of cultural values and norms 3. Vulnerability to natural disasters such as floods or earthquakes can pose risks to cultural heritage sites and artifacts.

6.3.4 Need assessment

Hala requires more green and recreational spaces to meet the needs of its growing population. Existing parks and sports complexes are insufficient and poorly maintained. Priority should be given to developing new parks in underserved areas, upgrading existing facilities, ensuring access to women and children, and creating cultural spaces for events. Heritage preservation, particularly Shrine of Hazrat Makhdoom Sarwar Nooh, is essential for cultural continuity and tourism potential.

The need assessment indicates that addressing recreational requirements in Hala cannot depend on the creation of new facilities alone; it must be implemented through a dual-track approach: (i) rehabilitation, upgrading, and proper maintenance of existing parks, playgrounds, and sports complexes (including safety features, landscaping, lighting, sanitation, and accessibility), and (ii) development of new green and recreational spaces in underserved neighborhoods to ensure equitable access. This approach should also prioritize inclusive design for women and children, provision of cultural and community event spaces, and conservation of heritage assets—particularly the Shrine of Hazrat Makhdoom Sarwar Nooh—to support cultural continuity and enhance tourism potential. Together, these measures will strengthen quality of life, social cohesion, and long-term urban livability.

6.3.5 Policy Guidelines[34]

The planning and development of recreational and sports facilities in urban areas should align with the Sindh Sports Policy, which aims to promote physical fitness, enhance sports culture, and develop talent across the province.

Key policy directions include:

- **Infrastructure Development**: Establishment and upgradation of parks, playgrounds, gymnasiums, and multipurpose sports complexes to ensure equitable access for all communities.
- **Inclusivity**: Recreational and sports facilities must be accessible for women, children, marginalized groups, and persons with disabilities.
- **Youth Engagement & Talent Development**: Local-level training programs, sports clubs, and tournaments should be introduced to nurture talent and engage youth productively.
- **Cultural and Traditional Sports**: Preservation and promotion of traditional games alongside modern sports, fostering local identity and heritage.
- **Collaboration & Partnerships**: Public–private partnerships (PPPs) and cooperation with educational institutions and civil society should be encouraged to strengthen recreational services.
- **Sustainability**: Recreational spaces should be designed with environmental considerations, including provision of green belts, plantation, and use of renewable energy in facilities.

By adopting these guidelines, master plans for cities across Sindh can ensure that recreation and sports become an integral part of urban development, contributing to healthier lifestyles, community well-being, and social cohesion.

6.3.6 Strategic Development Plan

The Strategic Development Plan for recreation, culture, and tourism in Hala aims to create regionally competitive recreational infrastructure, conserve cultural heritage, and promote local identity through art, language, and cuisine.

Long-Term Strategies

- Promote sustainability by installing solar panels in parks and recreational complexes, along with solar-powered pumps and fountains.
- Encourage sustainable architecture in new tourism and recreational facilities.
- Build supporting tourism infrastructure such as restaurants, marketplaces, and visitor amenities.
- Establish a multi-functional sports and wellness complex for gyms, training, and regional tournaments.
- Host regional cricket, soccer, and athletics tournaments to strengthen Hala's sports profile.

Short-Term Strategies

- Develop new community parks in underserved areas and upgrade existing parks with better walking paths, lighting, and seating.
- Provide multi-purpose sports fields and playgrounds to enhance youth engagement.
- Launch tourism promotion campaigns highlighting Shrine of Hazrat Makhdoom Sarwar Nooh and cultural sites.

[34] https://sportsandyouthaffairs.gos.pk/sports-policy/

- Ensure regular maintenance of parks and recreational facilities, including eco-friendly water and sanitation management.

6.3.7 Priority Projects

➢ **REHABILITATION/UPGRADATION OF PUBLIC HEALTH GROUND**

Hala City faces a significant lack of recreational facilities, with only one park available for public use. This project aims to address this gap by transforming the space into a functional, accessible recreational area. This project will promote physical activity, mental well-being, and community engagement, contributing to better public health outcomes. It will also provide a platform for health education and outreach, aligning with broader public health goals. Enhancing this space will improve the quality of life for residents and support the city's long-term development and wellness objectives.

➢ **Scope**

- Rehabilitation and upgradation of the existing public health ground into a safe, inclusive, and multifunctional recreational facility.
- Improvement of physical infrastructure, including pathways, seating areas, lighting, and boundary safety measures.
- Development of dedicated zones for walking, jogging, exercise, sports activities, and public gatherings.
- Landscaping and creation of green/open spaces to enhance environmental quality, community well-being, and mental health.
- Provision of sports and fitness facilities to promote physical activity and healthier lifestyles, particularly among youth.
- Incorporation of universal accessibility features such as ramps, non-slip surfaces, and accessible pathways for persons with disabilities, elderly, and children.
- Allocation of spaces for community events, youth engagement programs, and organized physical and recreational activities.
- Facilitation of public health outreach, awareness, and fitness-related programs within the rehabilitated ground.
- Ensuring inclusive design and safe access for all user groups, with emphasis on gender, age, and ability-sensitive planning.
- Promotion of sustainable use and long-term maintenance of the facility through durable materials and community-friendly design.

➢ **Size**

- City-scale recreational facility expected to benefit the majority of residents in Hala.
- Provision of multiple recreational zones including green spaces, play areas, pathways, seating areas, and small business outlets.
- Designed to accommodate both daily and visitors and tourism-based recreational activities, supporting local economic growth.
- Implementation will begin after completion of stormwater drainage works, ensuring climate resilience and public safety.

- **SDG's Alignment**

I. GOAL 3 – Good Health and well-Being

Access to recreational facilities directly contributes to improved physical and mental health. Parks and open spaces encourage physical activity, reduce stress, and promote social well-being. These facilities are preventive health infrastructure, supporting SDG 3.4, which targets reducing non-communicable disease and promoting mental health.

II. GOAL 11 – Make cities and human settlements inclusive, safe, resilient and sustainable

Recreational spaces are a core component of inclusive and sustainable urban planning. They enhance urban resilience, promote community cohesion, and improve the overall quality of urban life. This supports SDG 11.7, which aims to provide universal access to safe, inclusive, and accessible green and public spaces, particularly for women, children, older persons, and persons with disabilities.

- **Implementing Authority:**

Sindh Government, Local Government and private investors

- **Preliminary Cost Estimate**

Estimated Cost: 150 million PKR Approx.

S. No.	Project Name	Estimated Cost in Millions	ADP	Non ADP	Status	
					Short Term	Long Term
Recreational Areas						
1.	Rehabilitation/Upgradation of Public Health Ground	150	-	Non ADP	**Short Term**	-

6.3.8 Immediate Action Plan for Core Urban Area – Recreational Sector

- **Improvement of Open Spaces and Parks**

Existing open spaces, including parks, within the core urban area of Main Hala will be systematically restored and maintained. These green areas will be designed employing native plants and drought-resistant landscaping methods to promote environmental sustainability, thereby minimizing water usage and maintenance requirements.

Sarwari Public Park

Main Gate of Sarwari Public Park

I. Scope

The improvement of open spaces and parks will involve the following key actions:

- **Shade Structures:** Install shade structures, such as arches or shade sails, to provide protection from the sun and make outdoor spaces more comfortable for visitors. This will encourage greater use of parks during hot weather.
- **Seating Options:** Provide a variety of seating options, including picnic tables, and shaded areas for relaxation and socializing. This will make parks more inviting and user-friendly for families and individuals alike.
- **Aesthetic Enhancements:** Incorporate decorative elements like small streams to enhance the aesthetic appeal and create a calming environment. These features will also serve as focal points within the park.
- **Accessibility:** Ensure that pathways and trails are well-maintained and wheelchair-accessible, with ramps and smooth surfaces to facilitate ease of movement for all visitors, including those with disabilities.
- **Energy-Efficient Lighting:** Upgrade to energy-efficient LED lighting throughout the park to enhance safety and visibility during evening hours, while also reducing energy costs and contributing to environmental sustainability.
- **Stormwater Management:** Incorporate rain gardens, permeable pavements, and bioswales to effectively manage stormwater and reduce runoff. These features will help prevent flooding and promote groundwater recharge.
- **Cultural and Visual Interest:** Incorporate sculptures or other art installations to add cultural value and visual interest to the parks. These installations will reflect the local heritage and community identity

II. Size:

The program will rehabilitate and improve four priority recreational facilities in the core urban area of Hala. The total area covered under this initiative is 0.46 acres.

Recreational Facilities Preservation				
S. No	**Recreational Preservation Site Name**	**Area / Locality /Address (acre)**	**Area (acre)**	**Rehabilitation Required Area wise or job wise cost (PKR)**
				cost
1	Sarwari Public Park	**0.46**	**0.46**	50
Total				
Total PKR Rs. Million			**50**	

Note:

- ✓ Rehabilitation of lanes, streets and connection minor and major roads.
- ✓ Utility Infrastructure rehabilitation includes basic services of water supply, electricity and gas supply.
- ✓ Public facilities include rehabilitation and provisioning of public toilets, proper seating arrangements.
- ✓ As per the law-and-order situation security concerns makes the overall impact to uplift the society life with respect to secured environment.
- ✓ All these basic services in MC core areas need to be rehab for quick revitalization of people's life.

III. Preliminary cost estimate: 50 million

Model shades for park

Model Park

IV. Implementation Framework

- **Funding:** To be mobilized through ADP allocations, municipal budgets, and possible PPP/CSR contributions (e.g., local industries adopting parks).

- **Execution:** Rehabilitation will be phased, starting with Sarwari Park and Memon Sports complex as pilot projects.
- **Monitoring & Evaluation:** KPIs will include area rehabilitated (acres), number of parks made functional, user satisfaction, and reduction in encroachment/misuse.

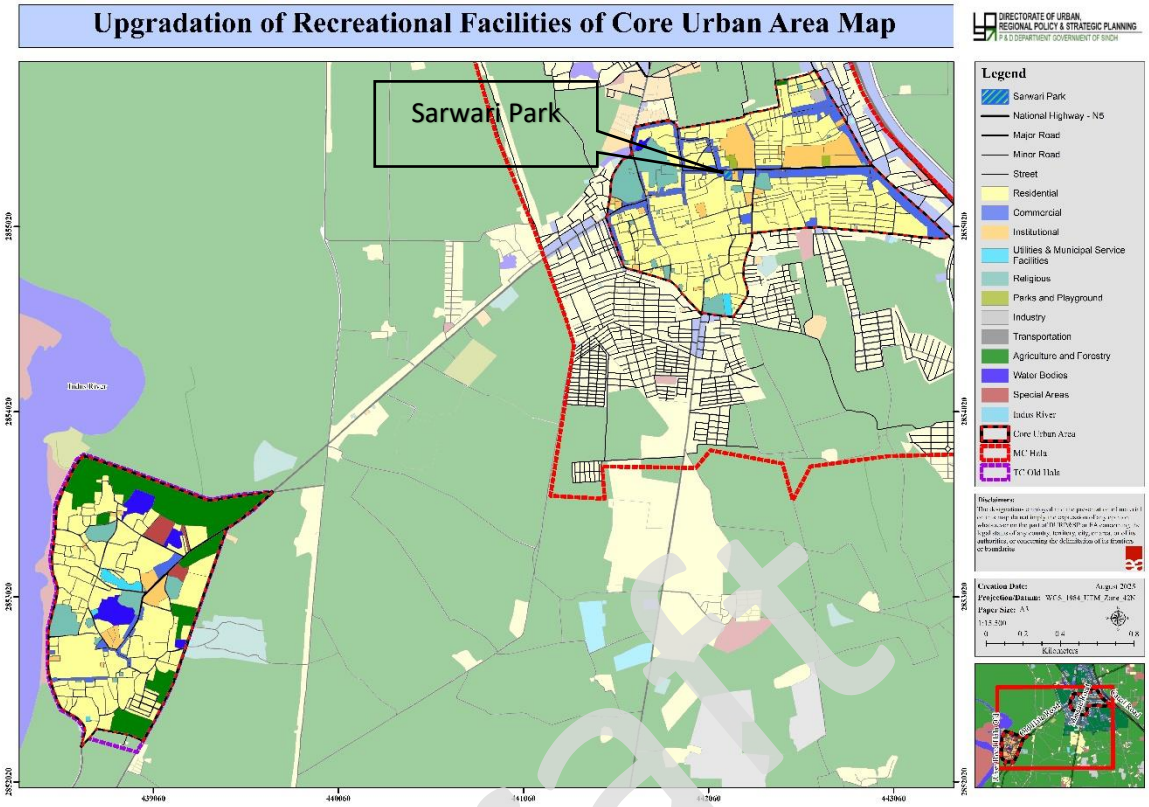
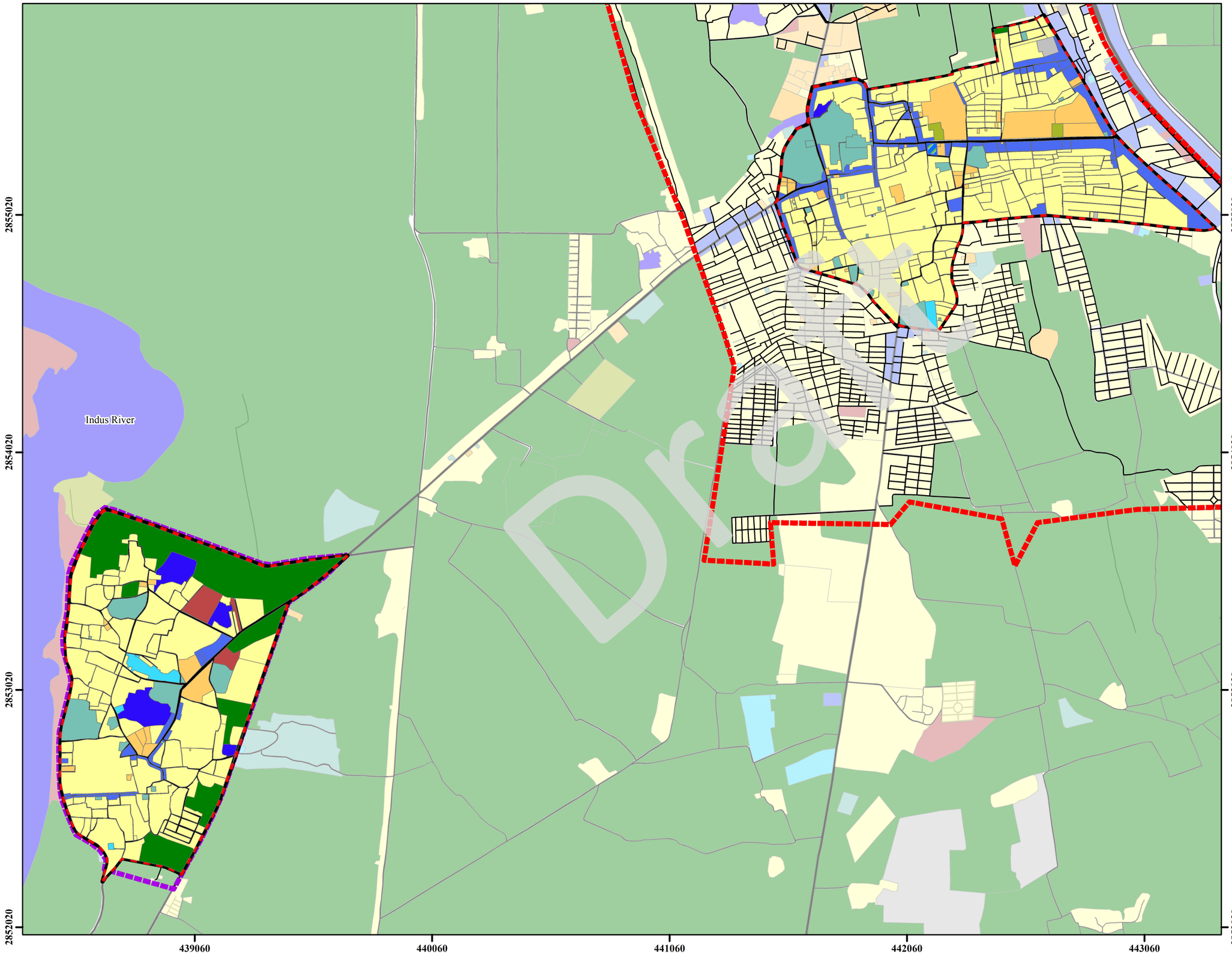


Figure 6-4: Upgradation of Recreational Facilities

Upgradation of Recreational Facilities of Core Urban Area Map

DIRECTORATE OF URBAN, REGIONAL POLICY & STRATEGIC PLANNING
P & D DEPARTMENT GOVERNMENT OF SINDH



Legend

- Sarwari Park
- National Highway - N5
- Major Road
- Minor Road
- Street
- Residential
- Commercial
- Institutional
- Utilities & Municipal Service Facilities
- Religious
- Parks and Playground
- Industry
- Transportation
- Agriculture and Forestry
- Water Bodies
- Special Areas
- Indus River
- Core Urban Area
- MC Hala
- TC Old Hala

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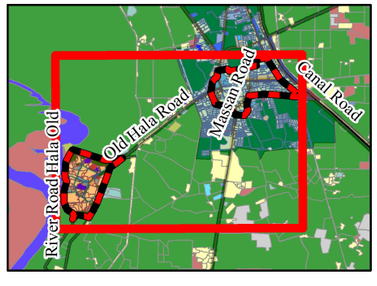

- **Historical Places and Cultural Heritage**

- **Conservation of Historical Places and Cultural Heritage**

The Shrine of Hazrat Makhdoom Sarwar Nooh will be preserved within the core urban areas of Hala MC, with immediate action initiated to conserve and revitalize this culturally and spiritually significant sites. As the shrine hosts the annual three-day Urs of Hazrat Makhdoom Nooh Sarwar (RA) one of Sindh's prominent spiritual and cultural events, attracting hundreds of thousands of devotees every year on the first Monday of Zulhaj, the conservation efforts will ensure that the site can continue to accommodate this major influz of pilgrims in a safe, organized, and dignified manner.

Interpretive signage and interactive displays will be installed to provide historical and educational context, including the saint's legacy as a 16th century scholar, the first translator of the Holy Quran into Persian, and a revered figure of suharwardi sufi order with a spiritual lineage tracing back to Hazrat Abu Bakr Siddique (RA). Landscaping around the historical structures will further enhance the environment and promote sustainable development within the urban core.

Furthermore, the restored shrine and its enriched surroundings will serve as a major religious tourism destination, supporting and cultural vitality and economic development of Hala. By accommodating the needs of pilgrims during the Urs and throughout the year, the project will strengthen Hala's identity as a center of spiritual heritage and cultural significance.

Shrine of Hazrat Makhdoom

Shrine of Hazrat Makhdoom Nooh Sarwar

I. Scope

This project aims to beautify and preserve the historical and cultural essence of Hala City, contributing to its aesthetic and historical prominence. Additionally, the project will enhance the city's potential as a religious tourism destination by conserving significant spiritual sites, improving visitor facilities, and creating an environment that supports cultural and faith-based tourism.

- **Assessment and Documentation**: Conduct a comprehensive assessment of the shrine of Hazrat Makhdoom Sarwar Nooh to evaluate its current condition. Document existing structural, architectural, and decorative features, including elements of cultural and spiritual significance that contribute to its role as a potential religious tourism destination.

- **Conservation Measures:** Implement conservation measures to address any identified issues, including repairing structural damage, stabilizing weakened areas, and preventing further deterioration. Use materials and techniques that match the original construction to preserve authenticity, ensuring the shrine remains a well-preserved spiritual landmark capable of supporting future religious tourism activities.
- **Restoration:** Undertake restoration activities to repair and restore the shrine's historical and artistic elements. This includes cleaning, refacing, and reintegrating original features while respecting the shrine's historical integrity.
- **Maintenance:** Establish a routine maintenance plan to ensure the long-term preservation of the shrine. This plan will include regular inspections, cleaning, and minor repairs as needed.
- **Protection and Security:** Enhance protective measures to safeguard the shrine form environmental damage. This may involve installing appropriate barriers or security systems, ensuring a safe and secure environment for visitors and pilgrims as the site evolves into potential religious tourism destination.
- **Public Engagement and Education:** Develop educational materials and interpretive signage to inform visitors about the historical and cultural significance of the shrine. Provide opportunities for public engagement to foster appreciation and respect for the site.

II. Size:

Recreational Facilities Preservation				
S. No	**Historical Places Preservation Site Name**	**Area / Locality /Address (acre)**	**Area (acre)**	**Preservation Required Area wise or job wise cost (PKR)**
				cost
1	Shrine of Hazrat Makhdoom Sarwar Nooh	**0.46**	**0.46**	200
Total				
Total PKR Rs. Million			**200**	
Note: ✓ Rehabilitation of lanes, streets and connection minor and major roads.				

III. Preliminary cost estimate: 200 million

IV. Implementation Framework

- **Funding:** To be mobilized through ADP allocations, municipal budgets, possible PPP/CSR contributions.
- **Execution:** Preservation will be phased, starting with Shrine of Hazart Makhdoom Sarwar Nooh

- **Monitoring:** KPIs will include area preservation, number of Sites Preserved, visitor satisfaction, and reduction in misuse.

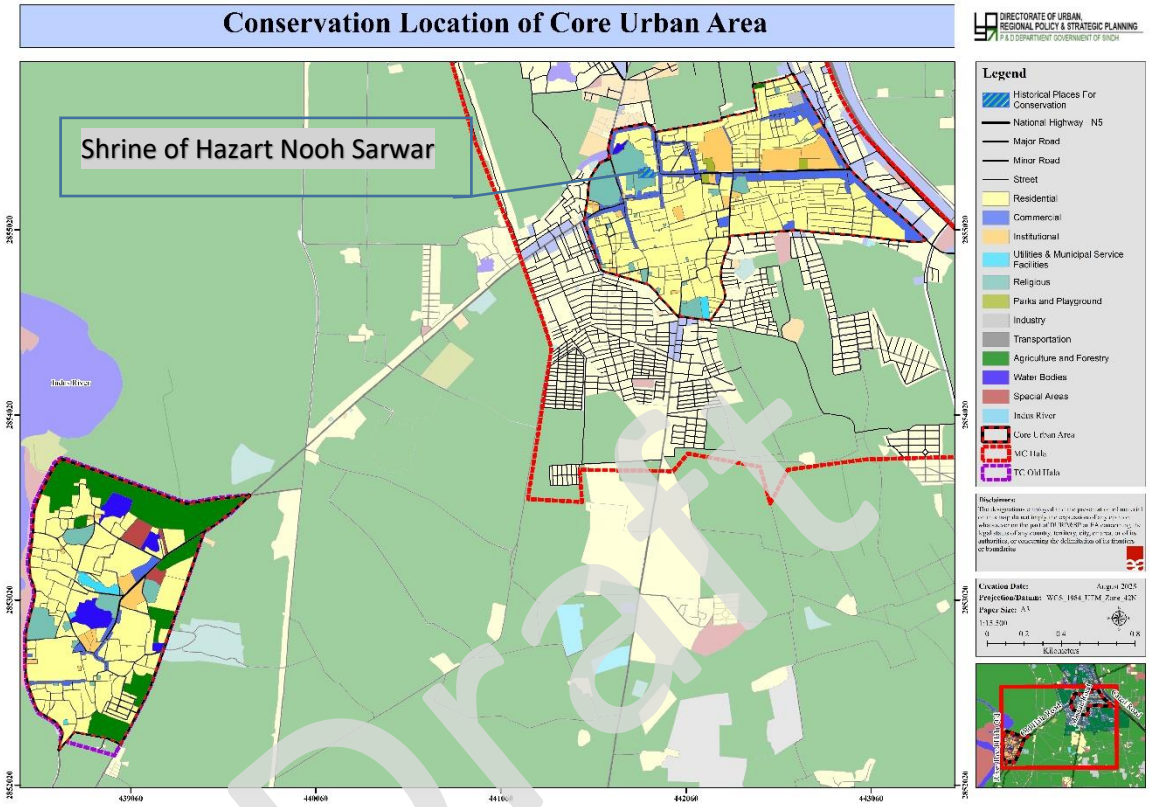

Figure 6-5: Heritage Conservation

Conservation Location of Core Urban Area

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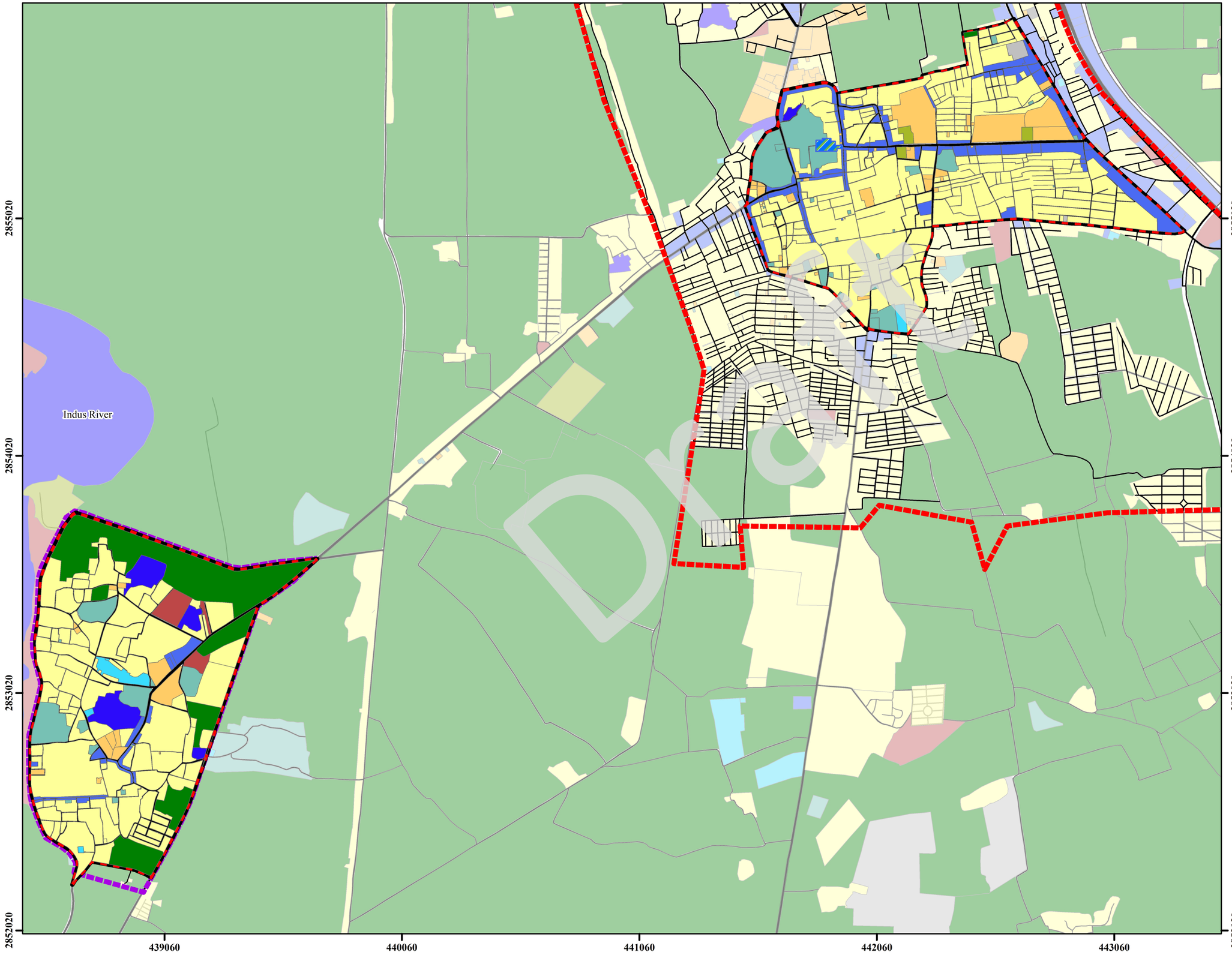
P & D DEPARTMENT GOVERNMENT OF SINDH



Legend

- Historical Places For Conservation
- National Highway - N5
- Major Road
- Minor Road
- Street
- Residential
- Commercial
- Institutional
- Utilities & Municipal Service Facilities
- Religious
- Parks and Playground
- Industry
- Transportation
- Agriculture and Forestry
- Water Bodies
- Special Areas
- Indus River
- Core Urban Area
- MC Hala
- TC Old Hala

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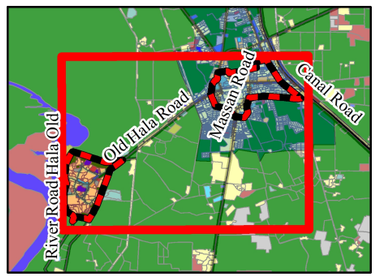

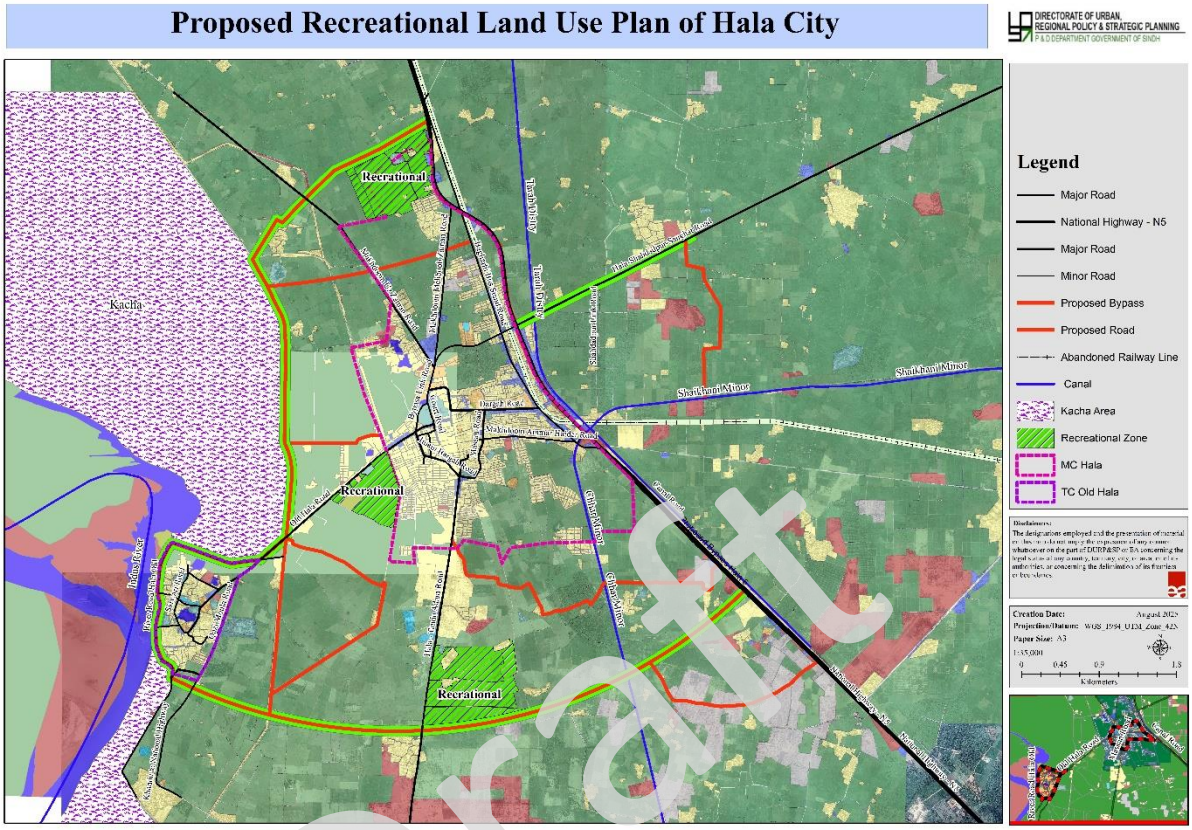

Figure 6-6: Proposed Recreational Land uses

Proposed Recreational Land Use Plan of Hala City

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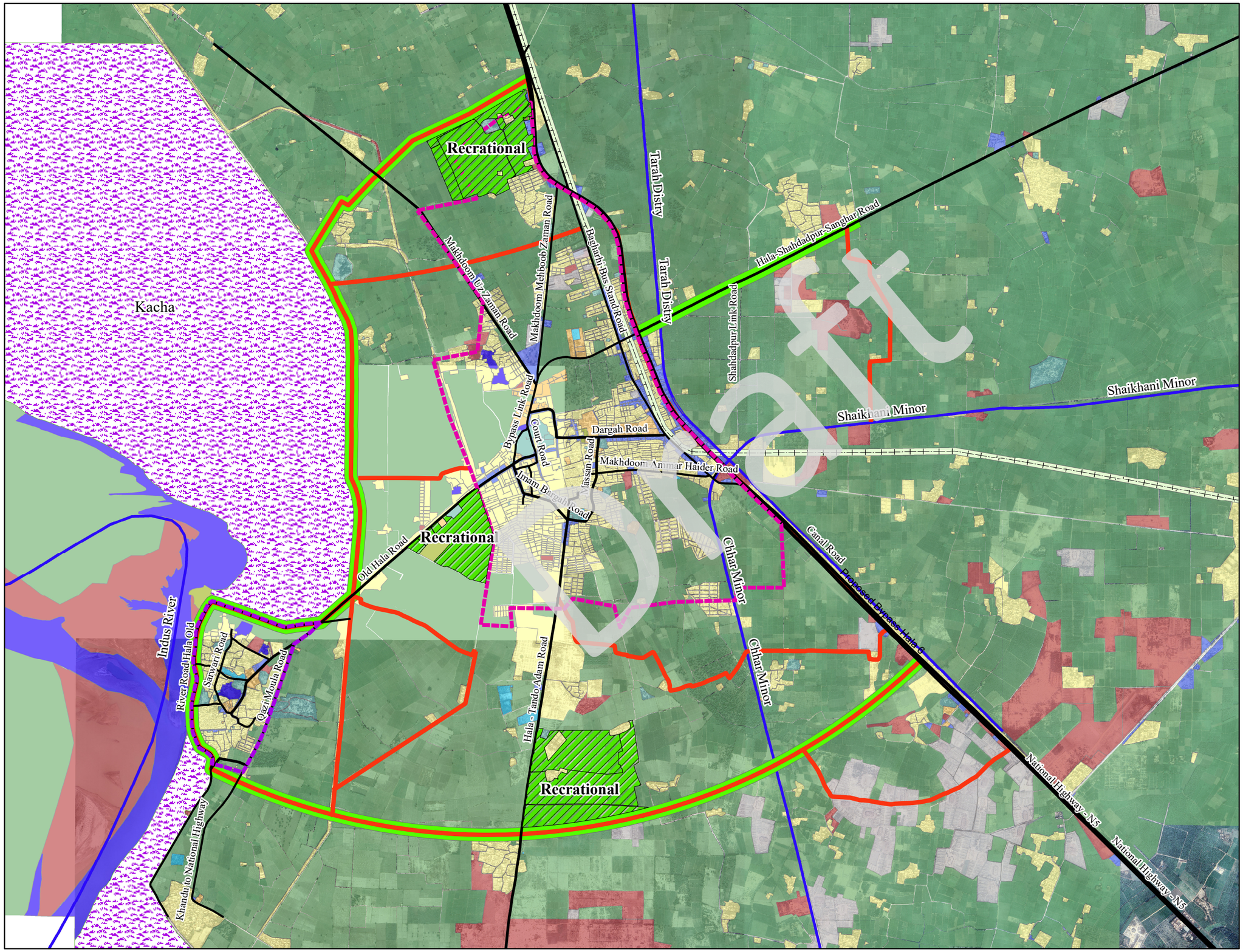
P & D DEPARTMENT GOVERNMENT OF SINDH



Legend

- Major Road
- National Highway - N5
- Major Road
- Minor Road
- Proposed Bypass
- Proposed Road
- Abandoned Railway Line
- Canal
- Kacha Area
- Recreational Zone
- MC Hala
- TC Old Hala

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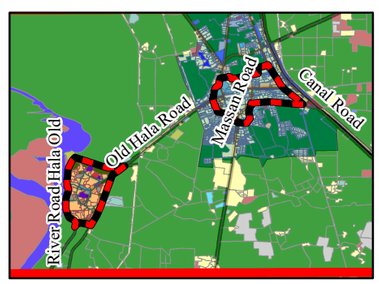

7. BASIC UTILITIES

7.1 Water Supply

7.1.1 Existing Situation

In Hala City, the water supply is predominantly reliant on groundwater, a common practice in areas lacking surface water sources. However, this dependence presents challenges, particularly due to the abandonment of older water supply infrastructure, which suggests inefficiencies and an inability to meet the growing demands of the population. This situation highlights the urgent need for the development of modern infrastructure that can effectively access and distribute groundwater. Additionally, concerns regarding the sustainability of these water sources arise from the risk of depletion due to high usage, urbanization, and climate change impacts. To address these issues, the Public Health Engineering Department is working to provide comprehensive documentation on the historical and current status of water supply schemes, utilizing a revised monitoring Performa to enhance transparency and management efficiency.

According to socio-economic survey a substantial 90% of the population relies on hand pumps within their homes as their primary source of water, indicating a heavy dependence on groundwater and remaining 10% rely on other sources. While 81% of respondents consider the drinking water clean and suitable for consumption, 19% express concerns about its quality. Notably, 93% of respondents report no health issues related to water quality, suggesting that existing sources may not significantly impact public health. However, 20.34% did report health problems, with diarrhea (44%) and gastrointestinal issues (29%) being the most common. Additionally, 94% of respondents do not encounter monthly or annual billing for water supply services, highlighting a lack of formalized management in the water supply system. This highlights the necessity for enhanced water quality monitoring and management to ensure the protection of public health in Hala City.

7.1.2 Issues

- Dependence on Groundwater: The primary water source for Hala City is groundwater. This reliance brings challenges like potential depletion of aquifers, especially in the context of urbanization, population growth, and climate change impacts.
- Obsolete Infrastructure: The city's older water supply infrastructure has been abandoned. This indicates issues with maintenance and the need for modernization to efficiently distribute water and meet current demands.
- Quality Concerns: Despite groundwater's general acceptance, there are concerns about its sustainability and potential contamination. The existing water quality analysis shows moderate bacterial presence, slightly elevated alkalinity, and varying levels of minerals like chlorides and nitrates. In some areas, fecal contamination and higher nitrate levels suggest risks of waterborne diseases.
- Limited Water Supply System: The city completed only one phase of water supply development

which is currently abandoned, mainly relying on hand-pumps and tube wells due to the availability of shallow, good quality groundwater. However, the reliance on individual hand-pumps and tube wells raises concerns about consistent quality and long-term sustainability.

- Vulnerability to Water Table Lowering: The city's groundwater sources are vulnerable to lowering water tables, which could compromise future water availability. This necessitates a more sustainable approach to groundwater management.
- Need for a Piped Water System: There is a desire for a piped water supply system sourced from canals, replacing hand pumps and tube wells. This shift would require treatment facilities, managing costs and effective administration.
- Challenges in Water Quality Management: The city's water supply, particularly from groundwater sources, needs regular monitoring for contaminants. Zinc concentration at one site is approaching permissible limits, indicating potential metal contamination.
- Socioeconomic Factors: A significant majority of the population uses hand pumps, and a small percentage lacks access to any water supply. The perception of water quality varies, with a notable portion considering it unclean. This highlights the need for improved water treatment and awareness programs.
- Projected Water Demand: The projected increase in water demand, from 2.65 MGD in 2025 to 4.74 MGD in 2045, underscores the need for strategic planning in water supply and infrastructure development to accommodate the growing population.

7.1.3 SWOT Analysis of Hala for Water Supply & Distribution Sector

Water Supply & Distribution			
Strengths	**Weakness**	**Opportunity**	**Strength**
1. Groundwater as the primary water source ensures accessibility to water for the population of 88,463 in 2025, expected to rise to 158,052 by 2045. 2. Existing infrastructure includes three phases of water supply schemes, the most ambitious being Phase III designed to cater to 46,650 residents.	1. Dependence on outdated infrastructure; older systems have been abandoned due to inefficiencies. 2. Groundwater sources at risk of depletion, posing sustainability challenges as evidenced by the necessary increase in demand from 2.65 MGD in 2025 to 4.74 MGD by 2045. 3. Concerns about water quality, with some areas showing and elevated nitrate levels up to 21.4mg/L, suggesting risks of waterborne diseases.	1. Infrastructure Rehabilitation. 2. Alternative Energy Sources. 3. Improved Monitoring and Data Collection. 4. Potential for developing a piped water system sourced from the Indus River to complement groundwater sources. 5. Scope for infrastructure modernization and the introduction of water conservation practices to enhance long-term sustainability. 6. Community education programs to raise awareness about water conservation and treatment, given the high reliance on hand pumps by 90% of the population.	1. Water Contamination Risks. 2. Population Growth. 3. Challenges in managing the increasing water demand with a growing population, projected to need 4.74 MGD by 2045. 4. Risk of escalating water table lowering, which could jeopardize future water availability. 5. Ongoing maintenance issues and the need for constant monitoring of water quality, particularly with the presence of zinc at levels approaching permissible limits at 3.98 mg/L.

7.1.4 Need Assessment

It is expected that the town of Hala will have a population of about 158,052 persons by 2045 and the daily demand of the town will be about (4.74 mgd) for a whole-day supply.
Estimated water demand for the period till 2045 is shown below:

Table 7-1: Water Supply & Demand Projected up to Year 2045

Town		2025	2030	2035	2040	2045
Hala	**Population**	88,463	97,880	108,957	122,106	158,052
	Per Capita daily demand @30 gped)	**2.65**	**2.94**	**3.27**	**3.66**	**4.74**

Source: Consultant's estimation based on PHED criteria

The need assessment indicates that addressing water supply requirements in Hala City cannot rely on groundwater extraction through individual hand pumps alone; rather, it must be implemented through a dual-track approach: (i) rehabilitation, upgrading, and reactivation of existing water supply infrastructure and abandoned schemes (including tube wells, pumping machinery, storage reservoirs, distribution networks, and water quality monitoring systems), and (ii) development of a planned and managed water supply system to improve coverage in underserved areas and reduce excessive dependence on household-level sources. This approach should also prioritize sustainable groundwater management, regular water quality testing and treatment, and climate-resilient design to mitigate risks of depletion and contamination. Strengthening institutional capacity, introducing formalized service management and billing mechanisms, and enhancing coordination with the Public Health Engineering Department will be essential to ensure transparency, efficiency, and long-term viability. Together, these measures will safeguard public health, improve service reliability, and support sustainable urban growth and livability in Hala City.

7.1.5 Sindh Drinking Water Policy 2017[35]

Principles:

- Population should be using an improved drinking water source which is accessible i.e. located on premises, available when needed and safe that is free of faecal and priority chemical contamination.
- Access to safely managed drinking water is a fundamental right of every citizen and that it is the responsibility of the Government to ensure its provision to all citizens.
- Water allocation for drinking purposes shall be given priority over other uses.
- In order to ensure equitable access, special attention shall be given to removing the existing disparities in coverage of safe drinking and for addressing the needs of the poor and the vulnerable.
- A supportive policy framework shall be developed that encourages alternate options through private provision, public-private partnerships, the role of NGOs and community organizations.

[35] Sindh Water and Sanitation Policy 2017

- Low-cost technologies in water and sanitation, that are easy and cost-effective to maintain shall be developed and used.

Objectives:

- Develop criteria for installation of new drinking water supply schemes and ensure that all new schemes are safely managed, rationalized and constructed through need-based criteria so that all areas and communities are served.
- Develop standardized service delivery models for both urban and rural drinking water supply schemes to improve efficiency, cost-effectiveness, improve monitoring and sustainability.
- Develop mechanisms for reuse, recycle and recharge of wastewater for other municipal and productive uses.
- Ensure that all drinking water supply systems are designed and constructed in line with the national drinking water quality standards and all municipal discharges comply with
- National Environment Quality Standards (NEQS).
- Install water treatment plants at existing drinking water supply schemes where required and incorporate water treatment facilities in all new drinking water supply schemes.
- Ensure development of water safety plans for all drinking water supply systems.
- Institute adaptation measures and disaster risk reduction and mitigation strategies to minimize the impact of climatic events on drinking water supply systems.

7.1.6 Strategic Development Plan

i. Long Term Plan

- Construction of water supply network of Whole city
- Municipality will adopt a demand led approach in providing access to safe water and sanitation to ensure that scarce resources are properly utilized and ownership and sustainability of schemes is ensured over the long-term.
- Frame a broad policy framework at the provincial level which encourages and supports city district to design and implement policy which is in-keeping with the existing capacities and strengths of institutions.

ii. Short Term Plan

- The design and layout of water supply pipes, storage tanks should ensure that there is no contamination by overflowing sewerage systems, for example by maintaining a minimum distance between the two systems.
- Wherever possible, preference should be given to rehabilitate existing schemes (functioning or not) over the construction of new schemes, unless there are special reasons to justify otherwise.
- Construction of water treatment plant for Town
- Feasibility Study for new water sources for town
- Exploration and regulation of fresh groundwater

7.1.7 Priority projects

- **Feasibility Study of the Surface Water Supply Scheme from Rohri Canal**

The feasibility study of the surface water supply scheme from the Rohri Canal is essential for ensuring a sustainable and reliable water supply for the region, addressing the increasing demand for water due to population growth and agricultural needs. This study will evaluate the technical, economic, and environmental aspects of utilizing water from the Rohri Canal, identifying potential challenges and solutions to ensure efficient implementation. By assessing the viability of this water source, the project aims to enhance water security, improve public health, and support economic development through the provision of adequate irrigation and domestic water supply. Ultimately, this initiative aligns with broader goals of sustainable resource management and aims to significantly improve the quality of life for residents in the area.

- **Scope**

  - Identification of a sustainable and reliable surface water source for domestic water supply
  - Assessment of current water supply systems and analysis of dependence on groundwater, including risks related to over-extraction and water quality.
  - Technical feasibility studies covering source yield, treatment requirements, transmission, storage, and distribution options.
  - Environmental assessment to evaluate impacts on ecosystems, downstream users, and compliance with environmental regulations.
  - Financial and economic analysis, including capital and operational cost estimates and affordability considerations.
  - Climate resilience assessment to ensure long-term sustainability of the proposed surface water source under changing climatic conditions.
  - Evaluation of integration with existing and planned urban water infrastructure to support future residential expansion.
  - Development of preliminary designs and implementation options for a sustainable surface water supply system.
  - Preparation of recommendations to inform policy formulation, investment planning, and decision-making for sustainable water supply.
  - Documentation and reporting of findings to support stakeholders, planners, and implementing agencies in moving towards safe and reliable water provision.

- **Size**

  - Coverage of selected urban and peri-urban areas identified for surface water-based domestic water supply.
  - Designed to serve existing households as well as projected population growth in targeted communities.
  - Assessment of water demand based on current consumption and future urban expansion trends.
  - Planning scale to include surface water source, intake location, treatment requirements, and main conveyance system.
  - Consideration of storage and primary distribution capacity sufficient for medium- to long-term needs

- Feasibility-level studies sized to support phased implementation and scalability of the water supply system.
- Institutional and planning scale aligned with municipal and regional water supply and urban development frameworks.

➢ **SDG's Alignment**

I. **Goal No. 3 – Good Health and well-being**

Improved access to safe water significantly reduces the prevalence of water-borne diseases, including diarrhea, cholera, and typhoid. This contributes to SDG 3.3 and 3.9, which aim to reduce illnesses caused by hazardous water and inadequate sanitation

II. **Goal No. 6 – Clean Water and Sanitation**

This is the most directly aligned goal. The project supports SDG 6.1 and 6.4, which target universal and equitable access to safe and affordable drinking water, and improving water-use efficiency across sectors. By strengthening intake and supply infrastructure, the project directly addresses water scarcity and quality.

➢ **Implementing Authority**

Hala MC, Government of Sindh and PHE Department

➢ **Preliminary Cost Estimate**

Estimated Cost: 300 million Approx.

S. No.	Project Name	Estimated Cost in Millions	ADP	Non ADP	Status	
					Short Term	Long Term
Water Supply						
1.	Feasibility study for water supply system	100	-	Non ADP	**Short Term**	-
2.	Procurement for land for water works	200	-	Non ADP	-	**Long Term**

➢ **CONSTRUCTION OF WATER SUPPLY NETWORK**

At present there is no centralized network water supply network for the city, the people are dependent on ground water due to unavailability of water supply network. This project will help to supply of water to the residents of Hala City.

➢ **Scope**

- Planning and development of a centralized water supply network for Hala City to provide reliable and treated water for drinking and domestic use.
- Identification and development of an appropriate water source, along with required intake, treatment, and storage facilities.
- Design of citywide water distribution network to ensure equitable and easy access to water within household premises.

- Installation of transmission and distribution pipelines, including household connections across the city.
- Provision of water treatment systems to ensure compliance with national drinking water quality standards.
- Reduction and gradual elimination of dependence on unsafe and contaminated groundwater sources.
- Integration of the proposed water supply system with existing and planned urban infrastructure.
- Inclusion of provision for operation, maintenance, and future expansion of the water supply network.
- Institutional coordination and capacity considerations for sustainable management of the water supply system.

➢ **Size**

- Citywide coverage encompassing all residential areas of Hala city.
- Designed to serve the entire current population of the city, with provision for future population growth.
- Network scale to include main transmission lines, secondary and tertiary distribution pipelines, and household connections.
- Infrastructure size to cover water source development, treatment plant capacity, and storage reservoirs adequate for daily demand.
- System capacity planned on per capita water demand standards for urban areas,
- Phased implementation size allowing gradual expansion of the network to newly developed areas.
- Institutional and operational scale aligned with municipal-level water supply management and service delivery.

➢ **SDG's Alignment**

I. GOAL 3 – Good Health and well-being Goal

Consistent access to safe drinking water significantly reduces the risk of waterborne diseases. This supports SDG 3.9, which focuses on reducing illness from contaminated water and poor sanitation.

II. Goal No.6: Clean Water and Sanitation

To ensure universal and equitable access to safe and affordable drinking water for all, improve water quality by reducing pollution, eliminate dumping and minimize release of hazardous chemicals, substantially increase water-use efficiency across all sectors, and ensure sustainable withdrawals and supply of fresh water.

III. GOAL 11 – Make cities and human settlements inclusive, safe, resilient and sustainable

Reliable water infrastructure is foundational for building inclusive and resilient urban environments. This project aligns with SDG 11.1 and 11.3 by promoting basic service provision and sustainable urban infrastructure planning.

➢ **Implementing Authority**

Government of Sindh, PHE Department and Hala MC and TC

➢ **Preliminary Cost Estimate**

Estimate Cost: **1,600 Million Approx.**

S. No.	Project Name	Estimated Cost in Millions	ADP	Non ADP	Status	
					Short Term	Long Term
Water Supply Network						
1.	Feasibility study for water supply network	100	-	Non ADP	**Short Term**	-
2.	Construction of water supply network	1,500	-	Non ADP	**Short Term**	-

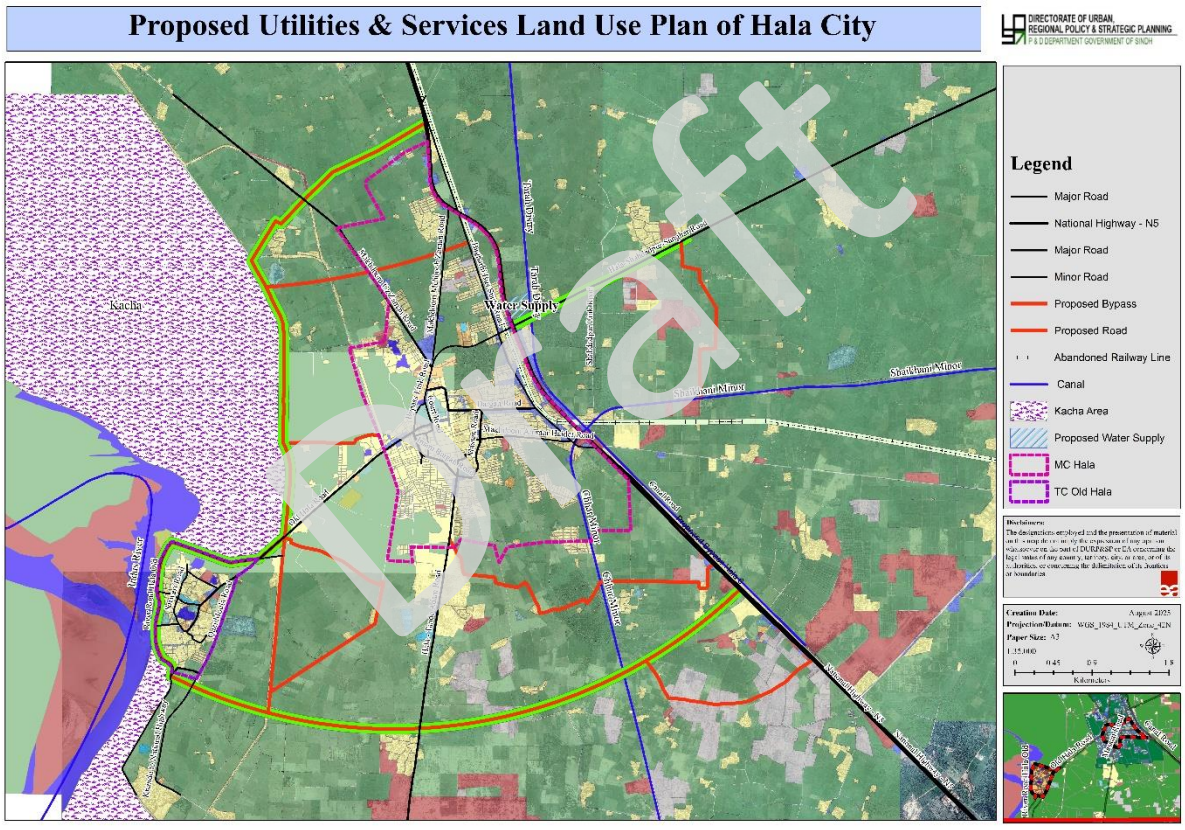

Figure 7-1 : Proposed Water Works

Proposed Utilities & Services Land Use Plan of Hala City

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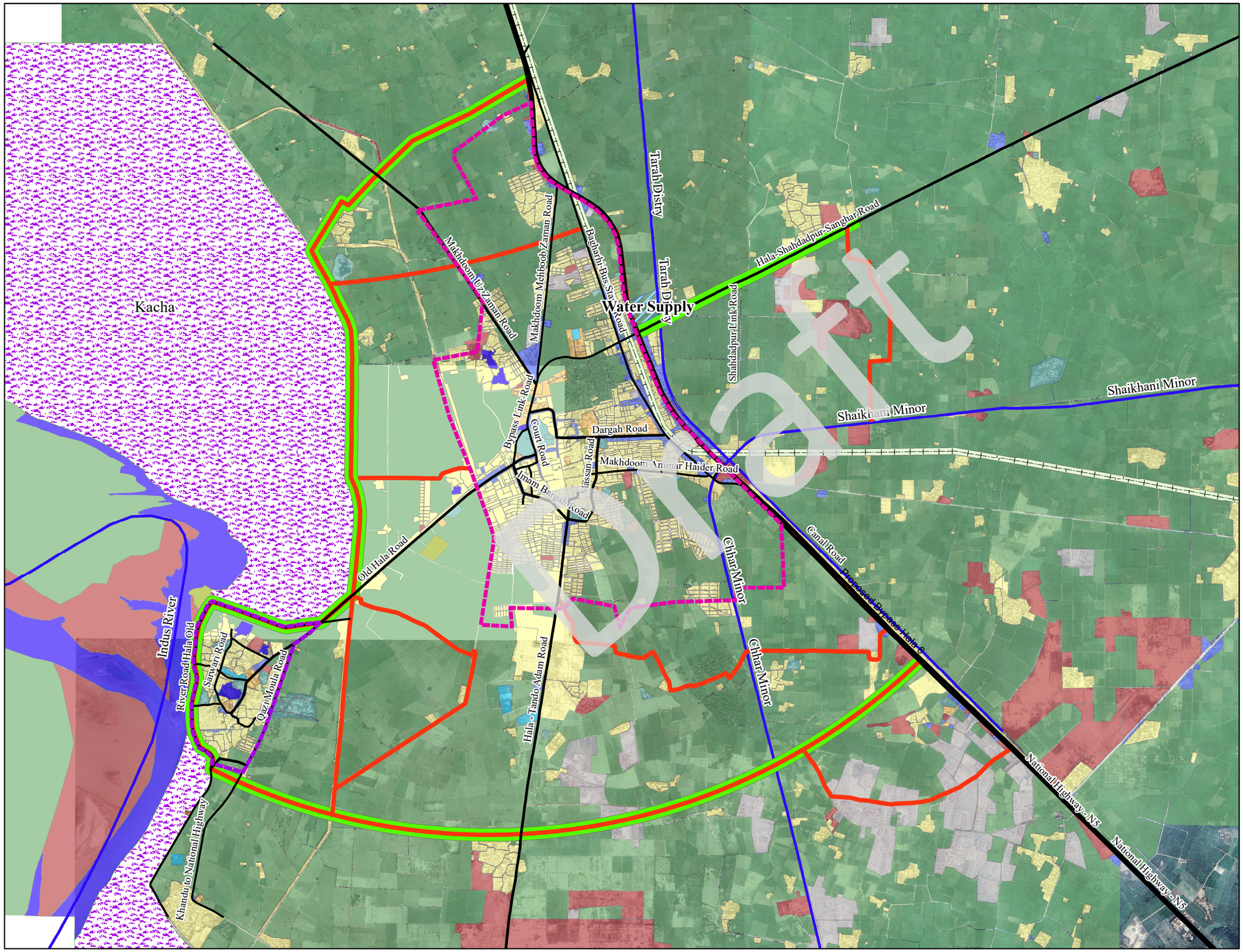
P & D DEPARTMENT GOVERNMENT OF SINDH



Legend

- Major Road
- National Highway - N5
- Major Road
- Minor Road
- Proposed Bypass
- Proposed Road
- Abandoned Railway Line
- Canal
- Kacha Area
- Proposed Water Supply
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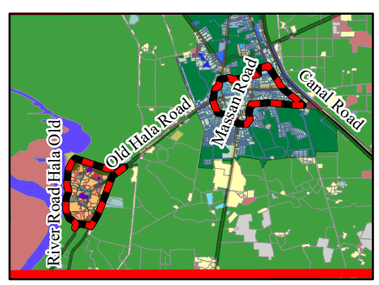


7.2 Sewerage and Drainage

7.2.1 Existing Situation

At present, the majority of Hala Town's sewage is managed through open drains, which account for about 92% of the total system. These drains are conspicuous along roadsides, encircling residential areas, markets, and even healthcare facilities. Only a meagre 7% of Hala Town's drainage system consists of semi-covered drains, a significantly small portion of the overall infrastructure. This scarcity of semi-covered drains exacerbates the challenges faced by the town in effectively managing its wastewater and drainage. In contrast, semi-covered drains make up a mere 7% of the system, pointing to a significant imbalance in infrastructure that leans heavily on outdated methods.

36% of respondents gave their opinion that health issues arises due to lack of sanitation facilities or improper collection and disposal system of waste water in the city health is contributing in increasing health problems, the remaining 64% were of the negative point of view. Addressing the concerns of the 36% experiencing health problems is important for improving public health.

Among those who reported health issues, 15% specified experiencing diarrhea, which suggests a potential link between sanitation issues and gastrointestinal diseases. Another 19% mentioned parasitic infections like intestinal worms as a health issue.

Waste Water Treatment Plant

The wastewater management infrastructure in Hala City is structured around key components including surface drains, pump houses, pumping machinery, diesel generators, rising mains, and compound walls, designed to support a growing urban population. The current wastewater generation is recorded at 3 MGD exceeding the estimated water supply demand and projections indicate increasing sewerage flows, reaching up to 3.79 MGD by 2045, driven by anticipated population growth.

Disposal stations are distributed across four main zones, each equipped to manage daily discharge and peak hour flows. The operational stations include Railway Station Disposal (Nawab Shah bus and railway station), Kharoth Khad Disposal (Dargha Road near Shah Colony), Jat Plot Disposal (near HACK Private School), and Landhi Machine Disposal (Talib-ul-Mola, under construction). Each zone features wet wells designed with a retention time of 30 minutes and working depth of 8 feet. Zone D, the largest, handles over 1 million gallons per day with a tank area of 1,270.32 square feet.

Pumping systems are operational across all zones, with discharge rates ranging from 935 GPM to 1,125 GPM. Powering these systems are electric motors with capacities between 30 and 75 BHP. Diesel generators support uninterrupted operations during power outages, ranging from 75 to 200 KVA across the zones. Disposal station areas range from 59 to 134 acres, proportionally handling 447,456 to 1,016,256 gallons per day in sullage return.

In addition to the zonal infrastructure, Old Hala relies on an open nullah system, with four observed disposal stations: Sarwari Colony, Bhutta Mouhla, Lakha Mouhla, and Qazi Mouhla. While specific capacity data is not available for these, their continued use highlights the need for modernization and integration into the citywide wastewater network.

This detailed infrastructure though functional must be expanded and upgraded to accommodate future population growth and increased flow demand. A focus on rehabilitating aging components, integrating

Old Hala's system, and ensuring environmental safety around disposal points will be essential for sustainable wastewater management in Hala City.

Based on the existing sewerage and drainage infrastructure, coverage gaps, recurring flooding patterns, and solid waste intrusion into drains, the sewerage and drainage strategy for Hala must prioritize (i) expansion and rehabilitation of the sewerage network, (ii) upgrading and desilting of primary and secondary drainage systems, (iii) provision of wastewater treatment and safe disposal facilities, and (iv) institutional and community-based mechanisms for operation, maintenance, and flood risk reduction.

7.2.2 Issues

- A staggering 93% of Hala Town's sewerage system consists of open drains with steep side slopes. While these drains are a legacy of past planning practices and serve the dual purpose of sewage and stormwater runoff, they pose significant sanitation and safety risks. The exposure of wastewater in these drains leads to contamination and health hazards, and the steep slopes increase the risk of accidents.
- A significant number of hospitals, clinics, and residential units discharge their wastewater directly into these open drains. This practice not only exacerbates pollution but also poses grave health and hygiene risks to the town's inhabitants.
- Only 7% of the town's drainage system comprises semi-covered drains, this scarcity exacerbates the challenges in managing wastewater and drainage effectively, highlighting a substantial infrastructure gap.
- The city is divided into zones, each with unique drainage challenges. Most areas rely on surface drains that lack comprehensive coverage and advanced disposal mechanisms.
- A significant portion of the population reports health issues due to inappropriate sanitation systems, with specific diseases like diarrhea and parasitic infections linked to poor sanitation.
- The majority of areas have open drains, with only a minor percentage having semi-covered or underground drains, reflecting limited infrastructure, which may not be equipped to handle such volumes effectively.
- The Municipal Committee is responsible for the operation and maintenance of the sewerage and drainage system, while the Public Health Engineering Department handles the planning and execution of related schemes.

7.2.3 SWOT analysis

Sewage Collection & Disposal			
Strength	**Weakness**	**Opportunity**	**Threats**
1. The existing sewerage system facilitates the urban area of the city.	1. Dilapidated Drainage Infrastructure. 2. Inadequate Operation and Maintenance. 3. Inadequate Sewerage Facilities.	1. Improvement of general hygiene/public health by proper sewerage system.	1. Environmental and Public Health Hazards. 2. Regulatory Non-compliance.

Sewage Collection & Disposal			
Strength	**Weakness**	**Opportunity**	**Threats**
2. Combined sewer system 3. A comprehensive zoning system divides Hala Town into four zones, enhancing targeted infrastructure management. 4. The presence of disposal stations strategically placed within the town, such as Railway Station and Kharoth Khad Disposal Stations, facilitates efficient wastewater management.	4. Insufficient Facility information. 5. Open sewers 6. Inefficient Record Keeping 7. No policy for re-cycling, and reduction in generation of sewerage. 8. Mixing of solid waste disposal into Sewerage. 9. A predominant reliance on open drains (92%) poses significant sanitation and safety risks, including contamination and accidents. 10. The sewerage system's design, largely comprising steep side slopes, is outdated and increasingly inefficient for managing both sewage and stormwater runoff. 11. Limited semi-covered drains (only 7%) restrict the effective management of wastewater and expose the town to health hazards.	2. Development of well-designed trunk sewerage network with a smaller number of disposal station. 3. Planning for well-connected gravity based open drainage system with covering ponds. 4. Job opportunities for skilled staff for proper maintenance. 5. Revenue can be generated through charging services for cleaning. 6. PPP in service delivery 7. Potential upgrades an expansion of the sewerage system could address the current inefficiencies and prepare for future population growth, as noted by the projected need to manage a water demand of 4.74 MGD by 2045. 8. Enhancing the infrastructure to include more semi-covered and fully covered drains could improve sanitation and reduce health risks.	3. Infrastructure degradation 4. The existing infrastructure is not sufficient to handle the projected increase in wastewater generated by the population, expected to rise 158,052 by 2045, leading to potential environmental and health issues. 5. Ongoing exposure to contaminated water due to inadequate sewerage facilities could exacerbate public health crises, with reported health issues like diarrhea affecting 36% of the population due to poor sanitation. 6. Frequent in-house and on-street flooding, reported by 52% of the population, highlights the inadequacies in the current

Sewage Collection & Disposal			
Strength	**Weakness**	**Opportunity**	**Threats**
			drainage system and the potential for property damage and further sanitation issues.

7.2.4 Need Assessment

The precise quantity of wastewater generation as recorded by the line department is 3 MGD, which is higher than the estimated water supply demand according to PHED data. However, estimates based on population growth and water demand provide a comprehensive outlook. Hala City is expected to experience significant changes in its water and sewerage flow demand from 2025 to 2045.

In 2025, with a projected population of 88,463, the water demand is estimated to be 2.65 MGD (Million Gallons per Day). Consequently, the sewerage flow, calculated as 80% of the water supply, is expected to be 2.12 MGD. By 2030, the population is projected to increase to 97,880, resulting in a water demand of 2.94 MGD and a corresponding sewerage flow of 2.35 MGD. Looking ahead to 2035, the population is anticipated to reach 108,957, with water demand rising to 3.27 MGD and sewerage flow estimated at 2.61 MGD. This trend continues in 2040, where the population is expected to grow to 122,106, increasing water demand to 3.66 MGD and sewerage flow to 2.96 MGD.

By 2045, Hala City's population is projected to reach 158,052. The water demand at this stage is estimated to be 4.74 MGD, resulting in a sewerage flow of approximately 3.79 MGD. These projections, assuming a per capita water requirement of 30 gallons per day and 80% conversion to sewerage flow, highlight the growing need for efficient water and wastewater management systems in Hala City to accommodate its expanding population and ensure sustainable urban development.

Table 7-2: Water and Sewerage Flow Demand

WATER AND SEWERAGE FLOW DEMAND					
Years	**2025**	**2030**	**2035**	**2040**	**2045**
Population	88,463	97,880	108,957	122,106	158,052
Water Demand @30 gpcd (MGD)	2.65	2.94	3.27	3.66	4.74
Sewerage Flows @80 % Water supply ((MGD)	2.12	2.35	2.61	2.93	3.79

Thus, between 2025 and 2045 Hala City will experience a substantial increase in wastewater generation, with sewerage flows rising from approximately 2.12 MGD to 3.79 MGD, in line with population growth and increasing water demand. Addressing this growing requirement cannot be achieved through isolated or

incremental interventions alone; it necessitates a comprehensive and phased approach that includes not only capacity expansion but also system-wide improvements. Meeting this need requires:

- Expansion and rehabilitation of the sewerage network, including trunk sewers and household connections, to safely convey increased wastewater volumes;
- Development and upgrading of wastewater treatment and disposal facilities to handle projected flows and reduce environmental and public health risks; and
- Strengthening and improvement of the urban drainage system, including desilting, capacity enhancement, and climate-resilient design, to prevent flooding, wastewater overflows, and mixing of stormwater with sewage.

Together, these measures will enable the transition from fragmented and overburdened sewerage arrangements to an integrated, efficient, and sustainable sewerage and drainage system that supports public health, environmental protection, and long-term urban development in Hala City.

7.2.5 Sindh Sanitation Policy 2017[36]

Targets:
Its key targets are:

- Eradicate Open Defecation from Sindh Province by 2025, while 70% villages of 13 high priority districts achieve the status of open defecation free by 2020.
- 100% households in Sindh have access to and use sanitary latrines by 2025, while 70% of rural households in high priority districts will achieve this by 2020.
- Strengthen and implement liquid waste management with sewer lanes and covered/improved drains with 85% coverage of urban areas and 60% coverage in rural areas.
- Create and develop wastewater treatment mechanisms to cover 75% of urban areas and 40% in rural areas by 2025.
- More than 90% of rural households and 100% of urban households wash hands with soap at critical times by 2025.

Principles:

- The Policy aligns itself with the goals and targets of the SDGs for sanitation, which require sanitation services to be safely managed, have a private improved facility where faecal wastes are safely disposed on site or transported and treated off-site; plus, a hand-washing facility with soap and water.
- Safely managed sanitation services is a fundamental right for all persons in Sindh province, and should be ensured through enhanced access to marginalized and low resource areas with equitable distribution of resources. Recognition of inequities and rights-based programming will be given key emphasis during the planning, execution and monitoring of sanitation programmes.

[36] Sindh Water and Sanitation Policy 2017

- The policy seeks to prioritize the areas that pose the greatest risk to human health namely hygiene awareness and excreta disposal, and then address the environmental health risks that are posed by poor drainage and solid waste disposal.
- Increase access to high quality nutrition-sensitive services, including access to water, sanitation facilities, and hygiene.
- The policy shall promote the community led approaches to strengthen the demand for safely managed improved sanitary conditions that emerges from local communities. The multistakeholder partnerships and collaborations comprising of citizens, governments, civil society, non-governmental organizations (NGOs), donors, academia, media, etc. be encouraged to maximize the synergies in designing and implementation of interventions.
- Affordable (in terms of designs as well as availability of water) and cost-effective technical solutions with necessary modifications and adaptations in technical standards to be consistent with cultural sensitivities of specific communities will be identified and marketed.
- The component sharing model as envisaged in the National Sanitation Policy will be Institutionalized gradually in which the community is responsible to construct lane and neighborhood level sewers (internal development) on self-help basis and the government focuses on trunks, disposal and treatment unit (external development).
- The role of women shall be an integral component of behavioral change communication strategies and project planning, implementing and monitoring through capacity development and social mobilization of relevant stakeholders.

7.2.6 Strategic Development Plan

The Strategic Development Plan aims to provide adequate sewerage and drainage facilities through equitable, efficient, and sustainable sanitation services, while simultaneously addressing stormwater management to mitigate urban flooding. The approach integrates household-level sanitation, trunk sewer expansion, wastewater treatment, and climate-resilient drainage systems:

1) Long Term Plan

- Flood protection embankments should be enhanced up to greater extent to provide maximum protection to surrounding villages.
- Prepare a GIS-based Sewerage and Drainage Master Plan, integrating sanitary flows and stormwater runoff modeling to prioritize investments.
- Development of well-designed trunk sewerage network with less number of disposal station.
- Planning for well-connected gravity based open drainage system covering pounds
- Gravity flow systems should be used for sewerage schemes so as to avoid pumping and O&M costs.
- Acquire Land & Provide Stabilization ponds for full treatment to produce acceptable quality of effluent for re-use.

- Complete removal or treatment of land where temporary pounds have been formed in main town area.

2) Short Term Plan:

- To raise living standards of community by providing improved drainage and Sewerage services.
- Priority for sanitation will be accorded to un-served, under-served areas, and disadvantaged areas.
- The plan will focus mainly on the details of the trunk sewers, treatment and disposals and re-use options. All other sanitation related agencies (cantonments boards, railways, etc.) will develop their plans in accordance with the overall plan
- Wherever existing sewerage systems discharge untreated sewage in storm water drains or irrigation canals it should be treated before discharging, and may be used for agricultural purposes or converted into lakes and ponds as part of recreational areas.
- An appropriate sewerage system plan should be implemented.
- Improvement of general hygiene/ public health by cleaning sewerage system
- PPP in service delivery
- Job opportunities for skilled staff for proper maintenance
- Revenue can be generated through charging services for cleaning.

7.2.7 Priority Projects

➢ **Construction / Rehabilitation of Primary and Secondary Drains**

Hala City's drainage system is heavily reliant on outdated open drains, which make up 92% of the network. These drains pose serious health, sanitation, and safety risks, especially near homes, markets, and healthcare facilities. With only 7% of the system being semi-covered, the town lacks adequate infrastructure to manage wastewater effectively.
Divided into four drainage zones, many areas suffer from incomplete coverage and inefficient disposal systems. The construction and rehabilitation of primary and secondary drains is essential to improve sanitation, reduce disease risk, and ensure safe and efficient wastewater disposal across the town.

➢ **Scope**

- Comprehensive assessment of the existing drainage system in Hala City, with emphasis on predominance of open drains and related health and safety risks.
- Planning and design of an improved urban drainage system to replace or upgrade open drains into covered and safer drainage infrastructure.
- Construction and rehabilitation of primary and secondary drains across all four drainage zones of the city.

- Extension of drainage coverage to currently unserved and inadequately served residential, commercial, and public areas.
- Improvement of wastewater conveyance and disposal efficiency to ensure proper and hygienic handling of effluent.
- Integration of stormwater management measures to reduce urban flooding during monsoon and rainfall events.
- Incorporation of safety features such as covered drains, proper slopes, and access points for maintenance.
- Environmental considerations to minimize pollution and protect surrounding land and water bodies.
- Provision for future expansion and increased capacity to meet growing urban demands.
- Coordination with municipal authorities for operation, maintenance, and long-term sustainability of the drainage system.

➢ **Size**

- Citywide coverage across all four drainage zones of Hala City.
- Rehabilitation and construction of primary and secondary drainage infrastructure in residential, commercial, and public areas.
- Replacement or upgradation of a significant portion of existing open drains with covered or semi-covered drainage systems.
- Drainage capacity sized to handle both wastewater and stormwater flows during peak rainfall events.
- Infrastructure scale designed to serve the current urban population with provision for future growth.
- Network extent sufficient to ensure continuous and efficient drainage connectivity across all zones.
- Implementation scale aligned with municipal drainage standards and long-term urban resilience objectives.

➢ **SDG's Alignment**

I. **Goal 3 – Good Health and well-being**
Open drains and stagnant water are breeding grounds for disease vectors and increase the risk of diarrheal diseases, malaria, and dengue. This project addresses SDG 3.9, which targets reducing illness and death from hazardous water and environmental conditions.

II. **Goal 6 – Clean Water and Sanitation**
This is the most directly aligned goal. The project supports SDG 6.2, which focuses on achieving access to adequate and equitable sanitation and hygiene for all, and SDG 6.3, which calls for improving water quality by reducing pollution and untreated wastewater discharge. Upgrading the drainage infrastructure is a fundamental step toward safe sanitation.

III. **Goal 11 – Make cities and human settlements inclusive, safe, resilient and sustainable**
Effective drainage systems are essential components of sustainable urban infrastructure. The project supports SDG 11.1 and 11.6, aiming for access to basic services and reducing the environmental impact of cities, especially related to waste and pollution management.

- **Implementing Authority**

Government of Sindh- PHE Department Hala

- **Preliminary Cost Estimate**

Estimate Cost: 1,000 million PKR Approx.

- **Provision of Storm Water Drain**

Hala City is currently lacking an adequate storm water drainage system, resulting in the city becoming inundated during heavy rainfall. The provision of a storm water drain system is critical for managing rainwater runoff effectively and mitigating the risks associated with flooding in Hala City. Currently, inadequate drainage infrastructure contributes to water accumulation during heavy rainfall, leading to property damage, health hazards, and disruption of daily activities. By implementing a comprehensive storm water drain system, this project will enhance urban resilience, protect infrastructure, and promote public health by reducing standing water that can breed disease. Furthermore, the initiative will improve environmental conditions by facilitating the natural flow of water, ultimately contributing to sustainable urban development and enhancing the quality of life for residents.

- **Scope**
  - Assessment of existing storm water drainage conditions in Hala City, including identification of flood-prone and waterlogged areas.
  - Planning and design of a comprehensive storm water drainage system to effectively manage rainwater runoff across the city.
  - Construction of primary, secondary, and tertiary storm water drains to ensure efficient conveyance of runoff during heavy rainfall.
  - Integration of the storm water drainage network with natural drainage paths and existing urban infrastructure.
  - Provision of adequate outfalls and discharge points to safely dispose of storm water without causing downstream impacts.
  - Incorporation of climate-resilient design standards to handle extreme rainfall events and future climate variability.
  - Measures to eliminate water stagnation in streets, residential areas, and public spaces.
  - Inclusion of environmental considerations such as groundwater recharge and protection of natural water bodies.
  - Phased implementation with provisions for future urban growth and expansion
  - Coordination with municipal authorities for operation, maintenance, and long-term sustainability of the storm water drainage system.

- **Size**
  - Citywide coverage encompassing all residential, commercial, and public areas of Hala City.
  - Drainage network scale including primary, secondary, and tertiary storm water drains.

- System capacity designed to manage peak rainfall events and projected increases in rainfall intensity due to climate change.
- Infrastructure extent sufficient to cover all major flood-prone and low-laying areas.
- Design size aligned with current urban land use and future city expansion.
- Integration scale compatible with existing roads, utilities, and natural drainage channels.
- Implementation size planned for phased development to allow gradual expansion and upgrades as the city grows.

➢ **SDG's Alignment**

I. **Goal 3 – Good health and well-Being**
Stagnant rainwater contributes to the spread of disease like dengue, malaria, and cholera. This project aligns with SDG 3.9, which aims to reduce illnesses caused by water pollution and environmental hazards

II. Goal 6 – Clean Water and Sanitation
Proper storm water management is essential for preventing the contamination of freshwater sources and managing runoff effectively. The project supports SDG 6.3, which focuses on improving water quality and reducing untreated wastewater discharge into the environment

III. Goal 11 – Make cities and human settlements inclusive, safe, resilient and sustainable
The project directly supports SDG 11.5 (reducing the number of people affected by water-related disasters) and SDG 11.6, which promotes reducing the environmental impact of cities. By preventing urban flooding and improving infrastructure resilience, the city becomes safer, more inclusive, and better prepared for climate challenges.

➢ **Implementing Authority**

Government of Sindh, PHED Hala

➢ **Preliminary Cost Estimate**

Estimate Cost: 1,000 mllion Approx.

➢ PROVISION OF SEWAGE TREATMENT PLANT (STP)

The establishment of a Sewage Treatment Plant (STP) is essential for addressing the significant sewage management challenges faced by Hala City. Currently, the absence of a centralized sewage treatment facility results in the improper disposal of wastewater, leading to environmental pollution and public health risks. By implementing an STP, this project will enable the effective treatment of sewage, ensuring that effluent is safely processed before being released into the environment. This initiative will not only improve sanitation and hygiene within the community but also protect local water bodies from contamination, contributing to sustainable urban development. Furthermore, the STP will support compliance with environmental regulations and enhance the overall quality of life for residents by fostering a cleaner and healthier living environment.

➢ Scope

- Assessment of existing sewage generation, disposal practices, and sanitation challenges in Hala City.
- Planning and design of a centralized Sewage Treatment Plant (STP) suitable for the city's current and future wastewater load.
- Identification and selection of an appropriate site for the STP, considering environmental, technical, and social factors.
- Design of sewage collection, conveyance, and inlet arrangements connecting existing and proposed sewerage networks to the STP.
- Selection of appropriate sewage treatment technology to ensure compliance with national environmental and discharge standards.
- Provision of treatment units, sludge handling and disposal systems, and effluent discharge or reuse arrangements.
- Integration of treated wastewater reuse options (where feasible) for non-potable purposes such as irrigation or landscaping.
- Incorporation of environmental safeguards to protect surface water, groundwater, and surrounding ecosystems.
- Inclusion of provisions for operation, maintenance, and capacity expansion to accommodate future urban growth.
- Coordination with relevant municipal and environmental authorities for regulatory compliance and long-term sustainability.

➢ Size

- Citywide service coverage to cater for sewage generated from residential, commercial, and public areas of Hala City.
- Treatment capacity sized according to current sewage generation rates, with provision for projected population growth and urban expansion.
- Infrastructure scale including the Sewage Treatment Plant, inlet works, treatment units, sludge management facilities, and effluent disposal systems.
- Design capacity aligned with national wastewater treatment and environmental discharge standards.
- System size adequate to integrate with existing and proposed sewerage and drainage networks of the city.

- Land area requirement sufficient to accommodate treatment facilities, buffer zones, and future capacity enhancement.
- Implementation scale planned to allow phased expansion in line with increasing wastewater flows.

➢ **SDG's Alignment**

I. **Goal 3 – Good Health and Well-being**

Untreated wastewater is a major vector for diseases like cholera, hepatitis, and dysentery. This project aligns with SDG 3.9, which targets the reduction of illnesses caused by hazardous water and pollution, contributing to a healthier population across Hala city.

II. **Goal 11 – Make cities and human settlements inclusive, safe, resilient and sustainable**

The project strengthens the city's urban sanitation infrastructure, making Hala more livable and environmentally responsible. It aligns with SDG 11.6, which promotes reducing the adverse per capita environmental impact of cities, particularly concerning water and sanitation.

➢ **Implementing Authority –**

Government of Sindh, PHED and Municipal Committee New Hala & Town Committee Old Hala

➢ **Preliminary Cost Estimate**

Estimated Cost: 650 million Approx.

S. No.	Project Name	Estimated Cost In Millions	ADP	Non ADP	Status	
					Short Term	Long Term
Sewage & Drainage						
1.	Construction / rehabilitation of primary and secondary drains	1,000	-	Non ADP	**Short Term**	-
2.	Construction of Storm Water Drain	1,000	-	Non ADP	**Short Term**	-
3.	Feasibility study for Wastewater Treatment Plant	50	-	Non ADP	**Short Term**	-
4.	Procurement for land for Wastewater Treatment Plant	200	-	Non ADP	**Short Term**	-
5.	Provision for Sewage Treatment Plant (STP)	650	-	Non ADP	**Short Term**	-

7.2.8 Immediate Action Plan for Core Urban Area

➢ Improvement of Sewerage and Drainage

In the core urban areas of Hala MC and TC, inadequate sewerage and drainage systems result in untreated sewage flowing into low-lying swamps. Households face open drains, foul odors, and frequent flooding, particularly during the monsoon season. Seasonal overflows worsen sanitation conditions, increase the prevalence of waterborne diseases, and expose residents to significant health, protect infrastructure, and support sustainable urban growth.

The Immediate Action Plan therefore focuses on upgrading the existing sewerage system and integrating stormwater management solutions. These interventions will reduce flooding risks, prevent environmental contamination, and enhance resilience against climate-induced rainfall events. This aligns with SDG 6 (Clean Water and Sanitation).

Broken road and over flow of sewerage water.

over flow of sewerage water.

I. Scope

The improvement plan for sewerage and drainage includes the following key actions:

- **Comprehensive Sewerage System Renovation:** A comprehensive rehabilitation of the sewerage system throughout the core urban areas. This will involve upgrading the entire network, replacing outdated pipelines, and installing new pumping stations as required. The objective is to ensure efficient management and proper diversion of wastewater to designated treatment facilities.

- **Provision for Stormwater Drainage:** Implement advanced stormwater drainage systems to effectively manage heavy rainfall and prevent flooding. This approach will include the installation of strategically positioned drains, catch basins, and retention ponds. Additionally, it will incorporate the use of permeable pavements and other green infrastructure solutions to manage runoff efficiently.

- **Preventive Maintenance and Monitoring:** Establish a routine maintenance schedule and monitoring system for the sewerage and storm water drainage systems. This will help identify potential issues before they become critical and ensure that the infrastructure remains in good working condition.

- **Public Awareness Campaigns:** Launch public awareness initiatives to educate residents about the importance of proper waste disposal and the impact of blockages in the sewerage and drainage systems. Engaging the community is crucial to maintaining the effectiveness of these systems.

II. Size:

The sewerage and drainage improvement plan will cover the entire core urban area, which spans 549.16 acres.

The detailed breakdown of the area and cost is as follows:

Total Core Urban Area: 549.16 Acres				
S. No.	**Name**	**Length (m)**	**Cost (PKR)**	
1	Sewerage System	25,440	1,500	
			Total Cost (PKR). Million	**1,500**

Note:

- ✓ Rehab of Sewerage system includes all urban core area network system with all related machinery and equipment.
- ✓ Rehab of Storm water drain system includes all the core town area storm drain system through steeps slopes and peak areas with all linking equipment and machinery.

III. Preliminary cost estimate

Drain Type

Main Rising = 1,054 Meter = 3,458.66 RFT
R.C.C Nala = 1,385 Meter = 4,544.42 RFT
Type A = 15,971 Meters = 52,400 RFT
Type B = 6,056 Meters = 19,686.11 RFT
Type C = 325 Meters = 1,067.17 RFT
Type-C Nala = 652 Meters = 2,140.34 RFT

A preliminary cost estimate will be provided, itemizing the costs associated with each of the activities listed above. The cost breakdown includes:

- Sewerage System Rehabilitation
- Storm Water Drainage System Installation
- Preventive Maintenance and Monitoring Setup
- Public Awareness Campaigns

Total Estimated Cost: **1,500 million**

IV. Implementation Framework

- **Funding:** Municipal Committee allocations, provincial ADP grants, and international development funds for sustainable infrastructure.
- **Execution:** Works will be executed by the Public Health Engineering Department (PHED) in coordination with the Municipal Committee.
- **Monitoring:** A preventive maintenance system will be institutionalized, supported by periodic inspections and reporting.

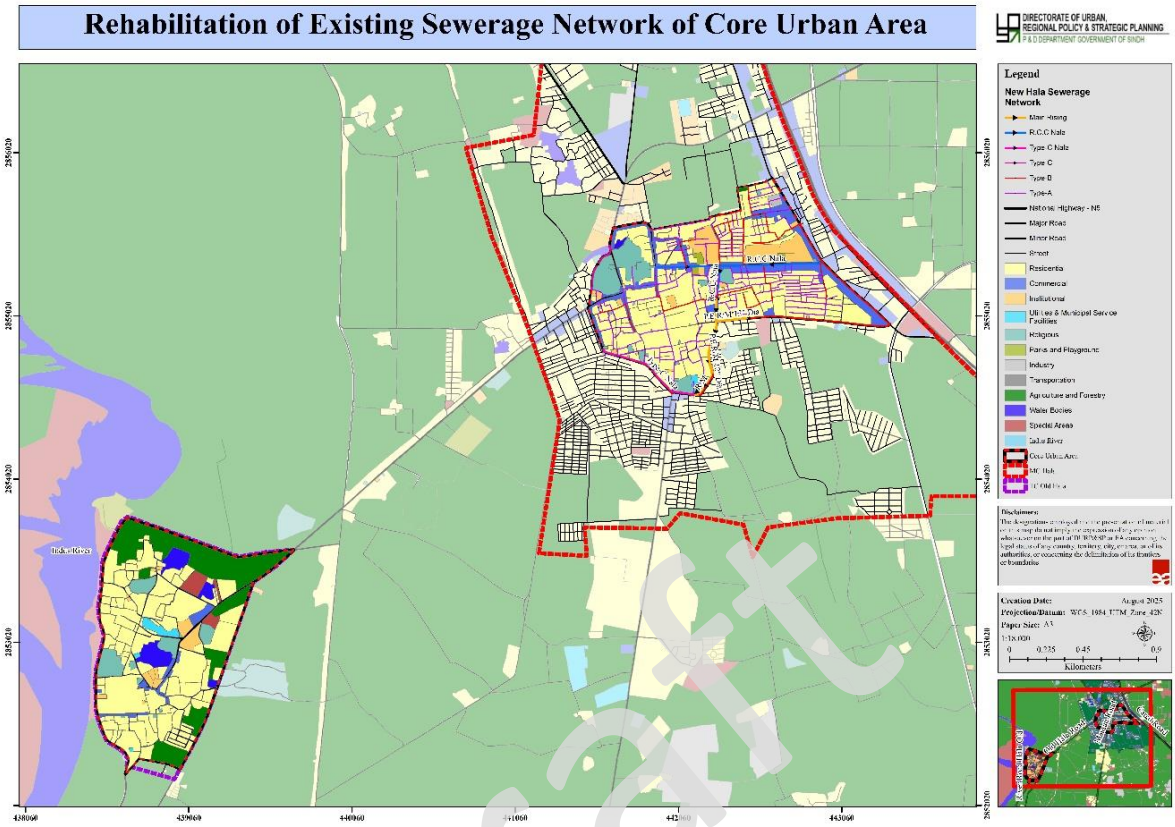
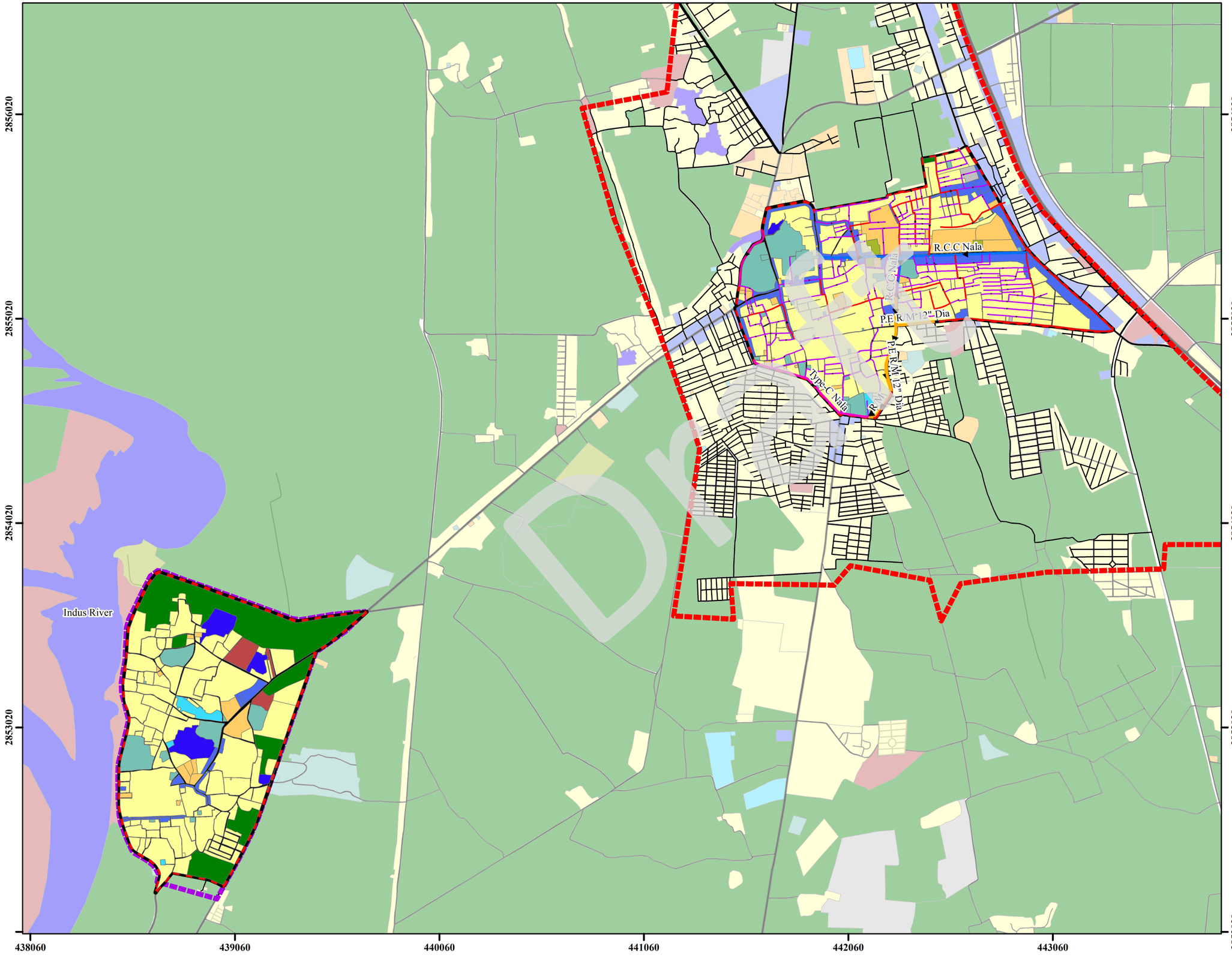


Figure 7-2: Rehabilitation of Existing Sewerage Network

Rehabilitation of Existing Sewerage Network of Core Urban Area

DIRECTORATE OF URBAN, REGIONAL POLICY & STRATEGIC PLANNING
P & D DEPARTMENT GOVERNMENT OF SINDH



Legend

New Hala Sewerage Network

- Main Rising
- R.C.C Nala
- Type-C Nala
- Type-C
- Type-B
- Type-A
- National Highway - N5
- Major Road
- Minor Road
- Street
- Residential
- Commercial
- Institutional
- Utilities & Municipal Service Facilities
- Religious
- Parks and Playground
- Industry
- Transportation
- Agriculture and Forestry
- Water Bodies
- Special Areas
- Indus River
- Core Urban Area
- MC Hala
- TC Old Hala

Disclaimers:
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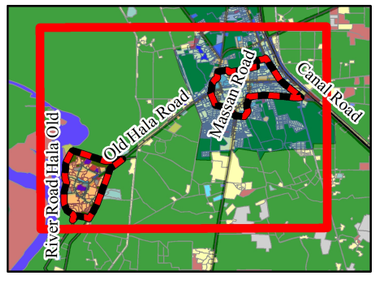


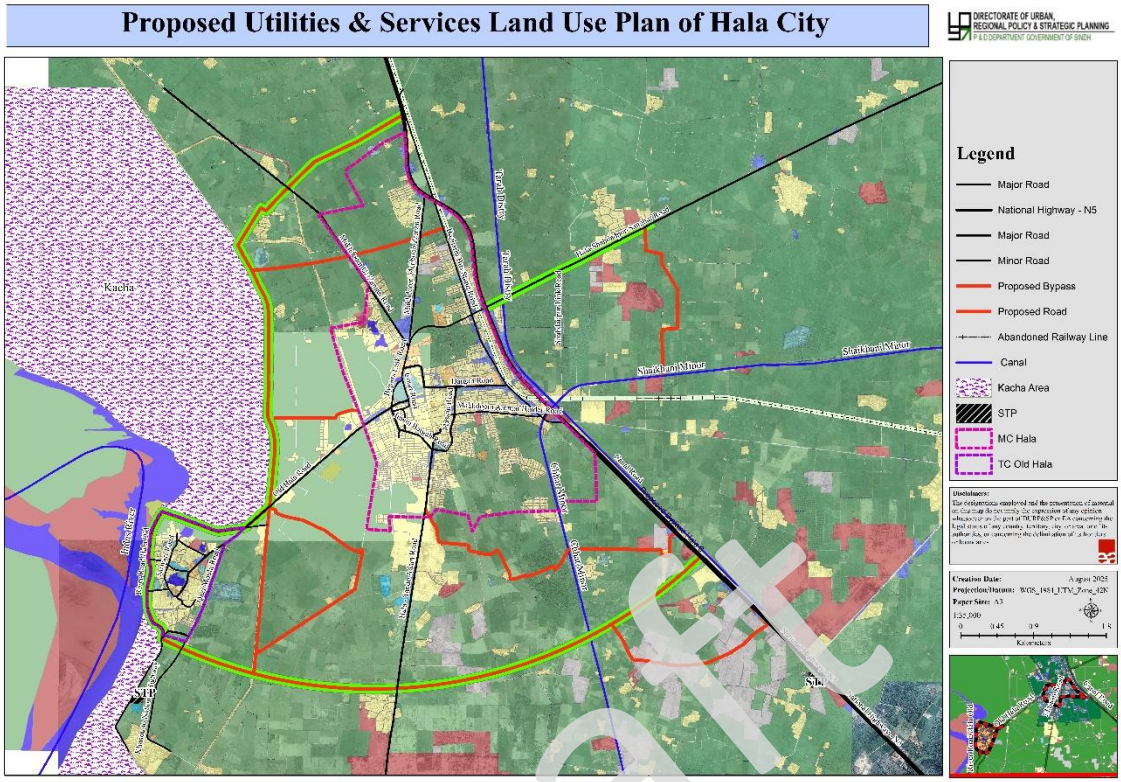
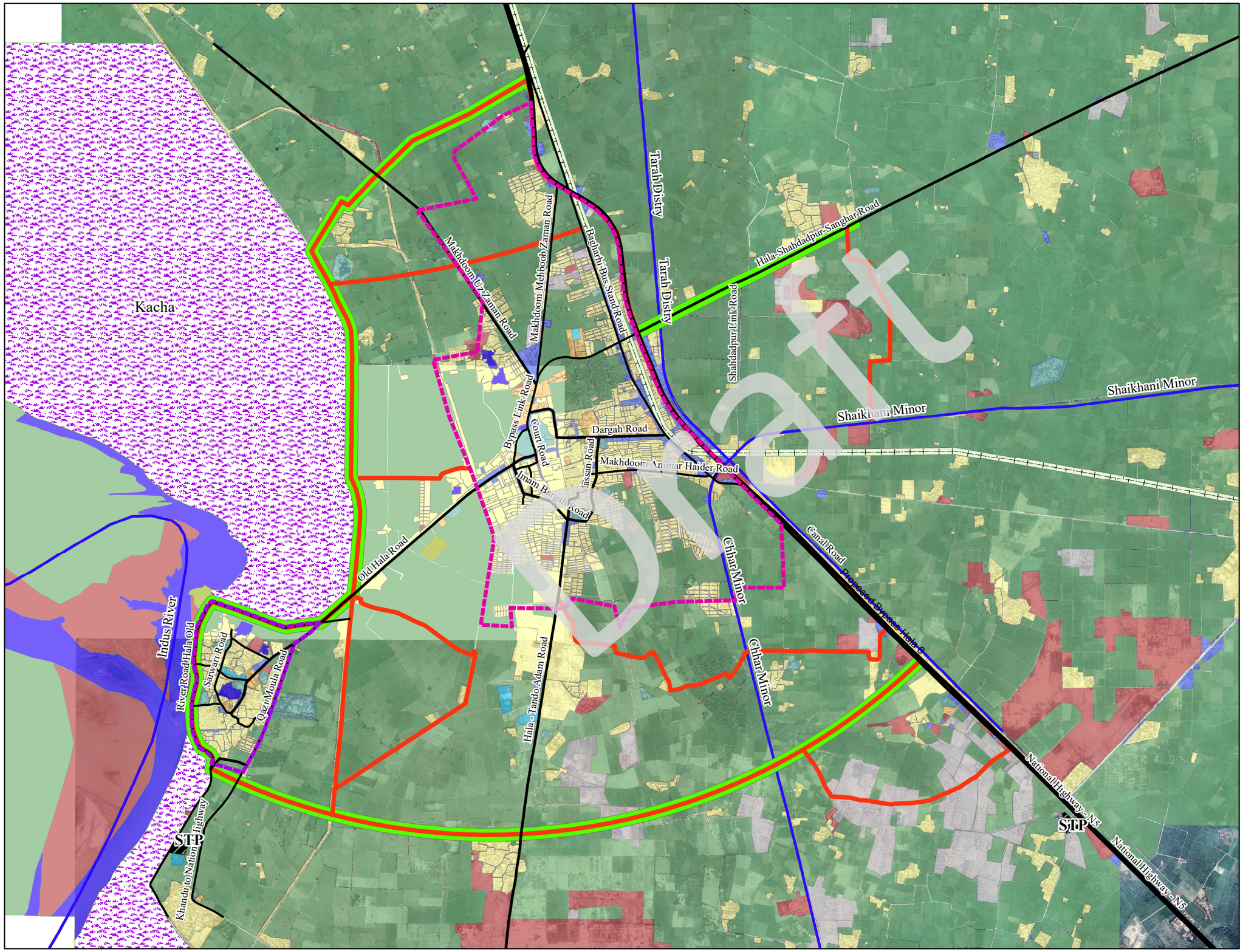


Figure 7-3: Proposed Sewage Treatment Plant

Proposed Utilities & Services Land Use Plan of Hala City

DIRECTORATE OF URBAN, REGIONAL POLICY & STRATEGIC PLANNING
P & D DEPARTMENT GOVERNMENT OF SINDH



Legend

- Major Road
- National Highway - N5
- Major Road
- Minor Road
- Proposed Bypass
- Proposed Road
- Abandoned Railway Line
- Canal
- Kacha Area
- STP
- MC Hala
- TC Old Hala

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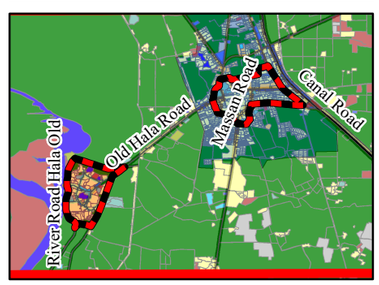


7.3 Solid Waste Management

7.3.1 Existing Situation

At present, the local authorities of Hala City are grappling with a range of challenges related to solid waste management. The collection system, as in most urban areas, operates through primary, secondary, and tertiary collection mechanisms. However, the existing setup, though functional, is insufficient to meet the growing needs of the city's expanding population and increasing waste output.

Primary Data Collection: Primary data indicates that the city has a modest fleet for solid waste collection. The available machinery includes six sanitation rickshaws, two pairs of tractors, two loader tractors, and one Master Mazda. Despite this equipment, operational capacity is stretched thin due to the volume of waste and limitations in infrastructure. According to WHO guidelines, healthcare waste generation stands at 0.66 kg per bed per day, and with 98 beds in the Taluka Hospital, Hala City produces approximately 64.68 kg of hazardous medical waste daily — a volume that demands proper handling and disposal protocols.

Secondary Data Collection: Secondary data reveals the absence of an officially designated landfill site in Hala City. Solid waste is mostly dumped in open areas near Village Parhiyar or in private, unregulated spaces that lack environmental safeguards. These informal dumping grounds pose serious health and ecological threats, including contamination of soil and groundwater, foul odors, and unsightly surroundings. The waste stream in Hala primarily consists of organic matter, plastics, paper, textiles, glass, and various inorganics, originating from residential, commercial, and limited industrial activities.

The municipal solid waste collection effort is significantly hindered by a shortfall in human resources. Although the Municipal Committee has 314 sanctioned employees and has filled all posts, the actual strength is still inadequate to meet citywide needs. Particularly, the number of sweepers and cleaning staff stands at 191, which is below the required 200 personnel for effective operations across three shifts. Increasing the workforce especially frontline staff responsible for street sweeping and drainage maintenance would enhance service delivery and ensure a cleaner urban environment for Hala's residents. Findings from the sample socioeconomic survey further highlight behavioral challenges in waste disposal. It was found that 71% of the population dispose of their daily waste outside their homes in open spaces, while only 28% rely on municipal sweepers. A mere 1% have hired private sweepers, and no significant use of municipal waste bins was observed. These trends underline the need for awareness campaigns and better infrastructure to encourage proper waste disposal practices among the community.

7.3.2 Issues

- Inefficient Collection System: Waste collection and street sweeping are costly and need to be made more efficient.
- Poor Medical Waste Management: Biomedical waste is mixed with household waste, posing serious health risks.
- Need for Composting Plant: A central composting facility is required, ideally with private sector participation.
- Lack of Landfill Site: There is no proper landfill, and developing one is urgently needed.
- Limited Community & Private Sector Involvement: Stronger engagement is needed for effective solid waste management.

- Low Public Awareness: Awareness programs through schools, media, and local groups are essential to promote cleanliness.
- Lack of On-site Recycling: Encouraging reuse and recycling at the source can reduce waste and costs.
- Absence of Formal Waste Programs: Structured waste management plans from generation to disposal are needed.
- No Waste Minimization Projects: Pilot projects can raise awareness and demonstrate the benefits of waste reduction.
- Untapped Waste-to-Energy Potential: A feasibility study is needed to explore waste-to-energy options for sustainability.
- No Environmental Impact Assessment (EIA): EIAs are essential for identifying waste streams and improving waste control measures.

7.3.3 SWOT Analysis of Hala for Solid Waste Management Sector

Solid Waste Management			
Strengths	**Weakness**	**Opportunities**	**Threats**
1. A comprehensive zoning system enhances targeted improvements in waste management, covering areas like Zones A, B, C, and D. 2. The city employs a variety of waste collection methods including six sanitation rickshaws and tractors, to handle daily garbage collection efficiently.	1. Lac k of landfill site. 2. Lack of proper infrastructure. 3. Mixing of biomedical waste. 4. Dependency on private sector 5. Significantly lower number of sweepers and cleaning staff. 6. A significant shortfall in human resources with only 191 sweepers and cleaning staff available, compared to the required 200. 7. Manual collection and sweeping methods dominate, which may not scale well with the city's growing needs, especially as the population increases to 158,052 by 2045.	1. There is an opportunity to increase the number of sweepers and cleaning staff to meet the required manpower for effective waste management. 2. Public-Private-Partnerships (PPP). 3. Policy Development and Enforcement. 4. Promoting Formal Waste Collection Infrastructure. 5. Recycling and Composting Initiatives. 6. Urgently needs to find and develop proper landfill site. 7. The active involvement of local communities and the private sector for effective waste-management system. 8. Implementation of Waste-minimization.	1. Environmental pollution. 2. Public health risks. 3. Regulatory non-compliance. 4. Inefficient waste management practices can lead to dissatisfaction among local communities. 5. Lack of authorized landfill sites leads to reliance on makeshift disposal methods, posing severe environmental and health risks.

Solid Waste Management			
Strengths	**Weakness**	**Opportunities**	**Threats**
		9. Upgrading to more efficient waste collection methods and increasing the fleet size could improve waste management capacity, especially in response to the projected daily waste generation 71,123 kg by 2045. 10. Implementing robust recycling programs and enhancing public awareness about waste segregation could reduce the overall waste burden.	6. Projected increase in waste generation, with an estimated rise from 39,808 kg per day in 2025 to 71,123 kg per day in 2045, places significant pressure on the existing infrastructure.

7.3.4 Policy Guidelines[37]

Implement integrated solid waste management with 100% coverage in urban areas and 60% in rural areas of Sindh by 2025.

Principle

- Develop integrated solid waste management system.
- Conduct a study on wastewater and solid waste to develop town level profiles (including Infrastructure, equipment and staffing)
- Conduct waste characterization studies.
- Smooth and efficient Solid waste collection and disposal by providing door to door collection services.
- Ensure Effective solid waste management by developing a list of staffing, hardware and equipment for solid waste management.
- Efficient Solid waste disposal and recycling by establishing transfer stations to reduce disposal time.
- Recycle solid waste by systematic separation.
- Sanitary landfill options identify for towns where it is feasible.
- Formalize contracts with companies for waste to energy options. At least each mega/intermediate city has a WTE (Waste to energy options) in place.
- Provide each town with a centralized and functional high risk hospital waste disposal facility.
- Update status of all slaughterhouses (recognized and unrecognized) in each district and prioritize those for rehabilitation, solid waste and wastewater management.

[37] Solid Waste Management Policy for Sindh
Sindh Water and Sanitation Policy 2017

- Provide refresher training on slaughterhouse safety and hygiene practice guidelines to 100% slaughterhouse staff in recognized slaughterhouses in safe handling and disposal of carcass, entrails, hides, and wastewater.
- Efficient and effective management of Industrial solid waste by determining the current status of industrial solid waste production and disposal and development of strategies and actions for efficient and effective management of industrial solid waste.
- Develop and use technologies that are affordable, applicable and cost effective to maintain the solid waste management.
- Allocation of proper landfill sites outside of the urban area and Final disposal of waste at least 500m from housing to a contained area chosen and designed according to geological conditions, water table, wind etc.

7.3.5 Strategic Development Plan

The aim of this strategic development plan is to improve the quality of life of the people of Hala city and the physical environment and also provide guidelines for the management of solid waste in the town.

i. Long Term Plan

- Formulate a city-wide policy aligned with national and provincial waste management guidelines, covering collection, segregation, treatment, and disposal.
- Increase the number and capacity of waste collection vehicles and equipment to ensure efficient door-to-door collection and street sweeping.
- Introduce a separate collection, transportation, and incineration system for biomedical waste in coordination with health facilities.
- Identify and develop a scientifically designed landfill site at a safe and suitable location, with proper leachate and gas management systems.
- Develop a composting plant for organic waste and establish recycling units for plastics, glass, and metals to reduce landfill pressure.
- Launch community campaigns and enforce policies for households, markets, and institutions to separate biodegradable, recyclable, and hazardous waste.
- Encourage private sector involvement in waste collection, recycling, and treatment operations through investment and service contracts.
- Empower neighborhoods to form waste committees and take local responsibility for waste segregation, monitoring, and cleanliness drives.
- Conduct feasibility studies and pilot projects for converting non-recyclable waste into energy, reducing landfill load and supporting sustainability goals.
- Digitize operations and introduce GIS-based systems to monitor waste generation, collection efficiency, landfill usage, and equipment performance.
- Draft and implement detailed Standard Operating Procedures (SOPs) for collection, transport, treatment, and disposal of all types of waste.
- Provide regular training to municipal staff, sanitation workers, and waste handlers on modern waste management techniques and safety practices.
- Make EIAs mandatory for all major waste-related infrastructure projects to mitigate environmental risks and ensure compliance with regulations.

ii. Short Term Plan

- Optimize the existing fleet usage (rickshaws, tractors, Mazdas) by introducing route planning, shift rotation, and regular maintenance for uninterrupted waste collection.
- Increase the number and capacity of waste collection vehicles and equipment to ensure efficient door-to-door collection and street sweeping.
- Techno-economic feasibility and detail study of characterization of waste is proposed on basis of the policy guidelines.
- Develop integrated solid waste management system keeping in mind the method, procedure and design at front end, middle end and back end, based on best possible public health practices and environmental protection laws/rules.

7.3.6 Priority Project

i. Feasibility Study for Solid Waste Management Mechanism

The feasibility study for a solid waste management mechanism is critical for developing an effective and sustainable approach to waste disposal in Hala City, where current practices are inadequate and contribute to environmental degradation and public health concerns. With increasing population density and urbanization, the city faces escalating waste management challenges, including overflowing dumping site and insufficient recycling efforts. This study will evaluate the technical, economic, and environmental aspects of various waste management strategies, enabling stakeholders to make informed decisions about the most appropriate solutions. By identifying viable options for waste reduction, recycling, and safe disposal, the project aims to enhance sanitation, reduce pollution, and promote resource conservation, ultimately improving the quality of life for residents and fostering a cleaner, more sustainable urban environment.

- **Scope**
  - Assessment of the existing solid waste generation, collection, transportation, and disposal practices in Hala City.
  - Quantification and characterization of solid waste streams, including household, commercial, and institutional waste.
  - Evaluation of current dumping sites and identification of environmental and public health impacts.
  - Analysis of technical options for solid waste management options, including capital and operational efficiency.
  - Evaluation of potential sites and technologies for transfer stations, recycling facilities, composting units, and sanitary landfill development.
  - Economic and financial analysis of proposed solid waste management options, including capital and operational costs.
  - Environmental and social assessment of alternative waste management scenarios to ensure regulatory compliance and sustainability.
  - Review of institutional arrangements, roles, and capacity of municipal authorities and private sector involvement.

- Identification of community engagement and awareness strategies to promote responsible waste practices.
- Preparation of a comprehensive feasibility report with recommended solid waste management solutions and implementation roadmap for Hala City.

➢ **size**

- City-wide coverage encompassing the entire municipal area of Hala City, including peri-urban settlements.
- Inclusion of all major waste streams: household, commercial, institutional, market, and public space waste.
- Assessment of the complete solid waste management cycle, from generation and primary collection to transportation, treatment, recycling, and final disposal.
- Evaluation of existing dumping sites and estimation of future land and infrastructure requirements for transfer stations, recycling facilities, composting units, and sanitary landfill development.
- Planning horizon covering short-, medium-, and long-term solid waste management needs in line with population growth and urban expansion.
- Engagement of key stakeholders, including municipal authorities, line departments, private sector operators, and local communities.
- Overall project classified as medium to large in scale due to its comprehensive scope, geographic coverage, and strategic importance for environmental protection and public health in Hala City.

➢ **SDG's Alignment**

I. **Goal 3 – Good Health and well-Being**
Uncollected solid waste is a breeding ground for bacteria, mosquitoes, and rodents, contributing to disease outbreaks. This project aligns with SDG 3.9, which aims to reduce illnesses caused by pollution and environmental hazards.

II. **Goal 7 – Affordable and clean energy**
The feasibility can include waste-to-energy options such as biogas from organic waste or RDF (refuse-derived fuel) from non-recyclables, supporting SDG 7.2 and 7.3, which aim to expand clean energy sources and enhance energy efficiency.

III. **GOAL 11 – Make cities and human settlements inclusive, safe, resilient and sustainable**
The project supports SDG 11.6, which focuses on reducing the environmental impact of cities, including municipal solid waste management. A structured Solid Waste Management system is a core requirement for sustainable urban development and livability.

➢ **Implementing Authority:**

Government of Sindh, PHED, Municipal Committee New Hala & Town Committee Old Hala.

➢ **Preliminary Cost Estimate**

Estimated Cost: 300 million Approx.

S. No.	Project Name	Estimated Cost In Millions	ADP	Non ADP	Status	
					Short Term	Long Term
Solid Waste						
1.	Feasibility study for construction of Central Composting Plant	100	-	Non ADP	**Short Term**	-
2.	Procurement for land acquisation process for Landfill Site.	200	-	Non ADP	**Short Term**	-

7.3.7 Immediate Action Plan for Core Urban Area

- **Provision for Solid Waste Management**

In Hala's core urban areas, inadequate waste collection leaves streets littered with garbage. The city's limited fleet cannot serve all neighborhoods, and socio-economic survey data shows that 71% of households dispose of waste informally, while 28% depend on municipal collection and 1% has privately appointed sweepers for waste collection.

The Immediate Action Plan for SWM focuses on segregated waste collection, community awareness, additional vehicles and bins, and better regulatory oversight. By modernizing operations and introducing user-based contributions, the plan aims to establish a sustainable model of solid waste management that ensures cleanliness, protects public health, and aligns with SDG 11 (Sustainable Cities & Communities) and SDG 12 (Responsible Consumption & Production).

Garbage accumulation in core urban area

I. Scope

The solid waste management improvement plan will include the following key actions:

- **Deployment of Community Bins:** Strategically place community bins throughout neighborhoods, including near residential areas, public spaces, and commercial zones, to facilitate efficient waste disposal and promote cleanliness. These bins will be robust in design, clearly labeled for different

types of waste (recyclables, organics, general refuse), and regularly maintained and emptied to prevent overflow.

- **Structured Waste Collection System:** Implement a structured waste collection system that includes both primary and secondary level collection. Secondary Level Collection involves the collection of waste from preliminary dumping areas at the ward level and transporting it to the main dumping site.
- **Public Awareness Campaign:** Launch an extensive public awareness campaign to educate the community on proper waste segregation practices. This will include workshops, informational leaflets, and community meetings to ensure widespread understanding and participation.
- **Street Sweeping:** Ensure that street sweeping is carried out on a daily basis by the Hala Municipal Committee (MC) and TC, with clear accountability measures in place.
- **User Fee Introduction:** PKR 250/month for shopkeepers and PKR 100/month for households to support O&M.
- **Infrastructure and Equipment:** Acquire additional waste collection vehicles and integrate advanced waste tracking technologies to enhance the efficiency of the waste management operations. Establish temporary or enhanced waste disposal facilities, such as portable transfer stations, to manage current waste volumes effectively.
- **Regulatory Compliance and Contingency Planning:** Ensure strict adherence to existing environmental regulations and develop contingency plans to address potential disruptions or emergencies in waste management.

II. Size:

The implementation will cover the entire core urban area (549.16 acres) and will require a scalable approach to accommodate increased population and waste generation.

III. Preliminary cost estimate:

Preliminary cost estimate: 190 million

S.No	Name	Containers No.s	Cost (PKR)
Total Core Urban Area: 549.16 Acres			
1	Placing of Garbage Container at different sites/locations in core Urban area	125	**190**
		Total Cost (PKR). Million	**190**

Note:
1. Each site located for garbage container must be strictly followed by MC to collect and manage solid waste from this site for proper management of the core area.
2. Containers must be fully get maintained by MC office.
3. Sindh solid waste management department/authority will keep control on each project for the uplifting of town as per master plans.

Modern Community Bins


Modern Community Bins

IV. Implementation Framework

- **Funding Sources:**
  - Municipal budgets dedicated to SWM.
  - Provincial government ADP grants for environment and sanitation.
  - Community contributions via user fees.
  - International development support for sustainable SWM programs.
- **Execution:** MC and TC Hala in collaboration with SSWMA.
- **Monitoring:** Smart monitoring tools (GPS tracking, digital reporting) to improve accountability.

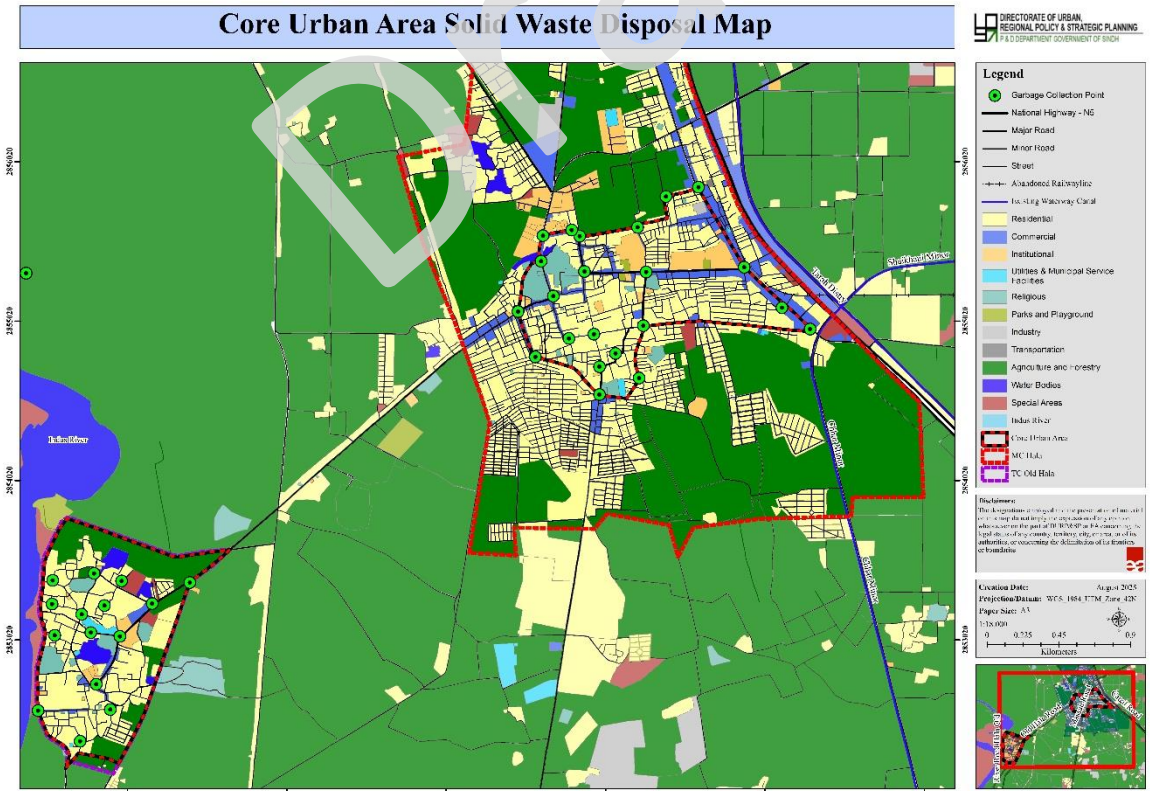
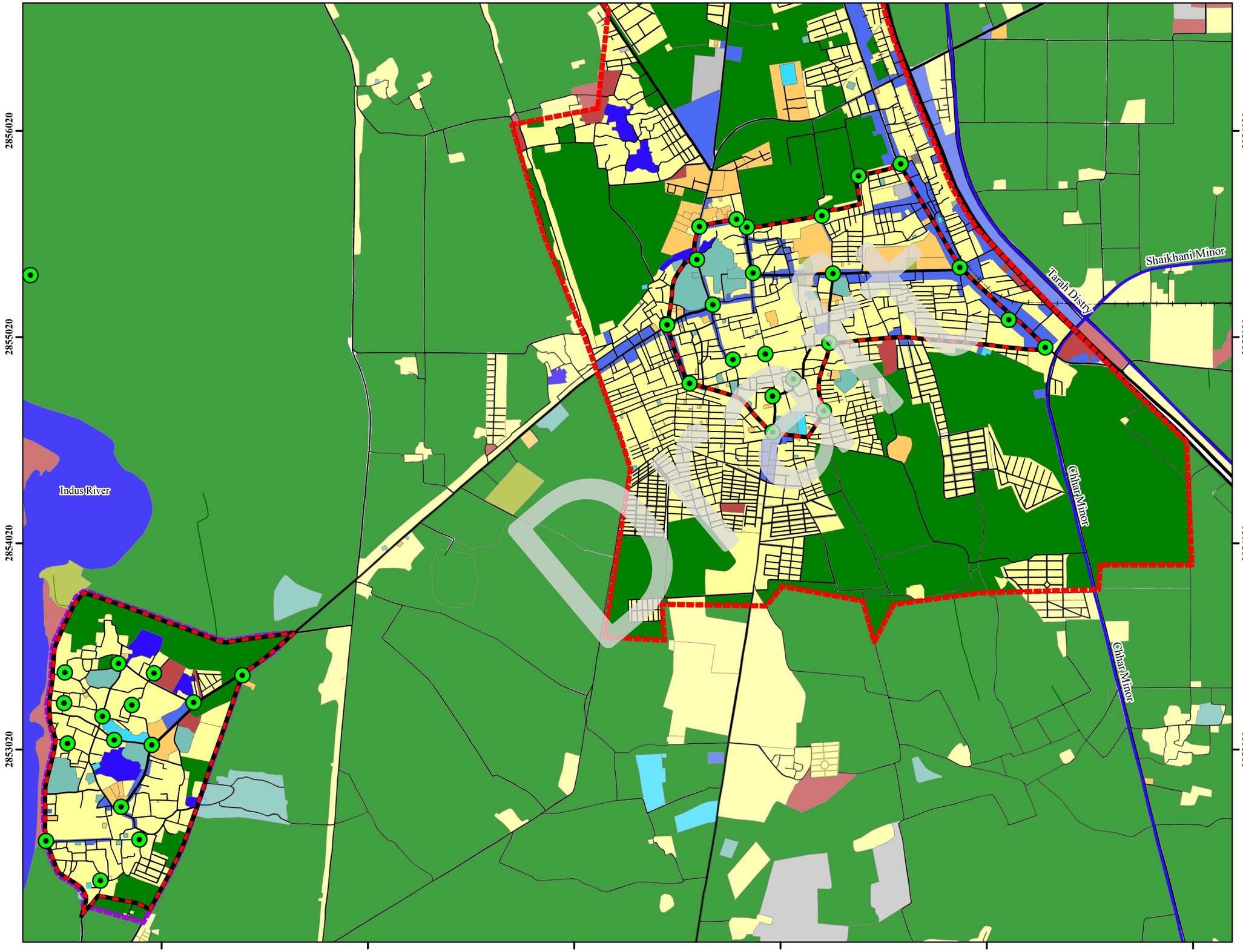


Figure 7-4: Garbage Collection Points for Core Urban Area Map

Core Urban Area Solid Waste Disposal Map

DIRECTORATE OF URBAN, REGIONAL POLICY & STRATEGIC PLANNING
P & D DEPARTMENT GOVERNMENT OF SINDH



Legend

- Garbage Collection Point
- National Highway - N5
- Major Road
- Minor Road
- Street
- Abandoned Railwayline
- Existing Waterway Canal
- Residential
- Commercial
- Institutional
- Utilities & Municipal Service Facilities
- Religious
- Parks and Playground
- Industry
- Transportation
- Agriculture and Forestry
- Water Bodies
- Special Areas
- Indus River
- Core Urban Area
- MC Hala
- TC Old Hala

Disclaimers:
The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of DURP&SP or EA concerning the legal status of any country, territory, city, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Creation Date: August 2025
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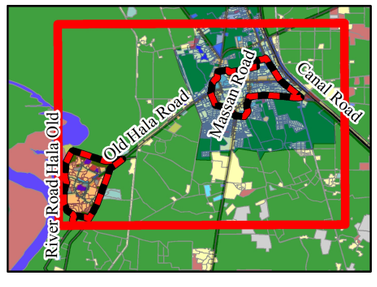
Kilometers



7.4 Firefighting[38]

7.4.1 Existing Situation

Hala City does have firefighting services available to address emergency situations. Currently, there are two fire-fighting vehicles operational within the Municipal Committee of Hala. However, to meet the city's fire-fighting needs effectively, an additional two fire fighting vehicles are required as suggested by the MC Office. At present 02 fire brigade with equipment are present in Hala city. The sanctioned number of fire-fighting staff in the Municipal Committee of Hala is 32. This team of actual fire-fighting staff is responsible for managing emergency fire incidents within the city. However, to ensure comprehensive fire-fighting coverage and readiness, an additional 48 fire-fighting staff members are needed in the Municipal Committee of Hala MC.

Improving the city's fire-fighting capabilities and expanding the number of vehicles and trained personnel is essential to enhance emergency response and better protect the lives and properties of the residents of Hala MC.

7.4.2 Need assessment

As the current total population of Hala is 88,463 which will be 158,052 in 2045. As per National reference manual the one fire station is recommended for 0.1 million population and one fire engine is required for 50,000 population. Currently there are two vehicles available in Hala Town. So, there is one fire engine needed for Hala Town.

7.4.3 Strategies

- City committee people would need to be trained about local early warning systems, evacuation, first aid search and rescue, firefighting etc.
- Provision of Sprinkler protection should be ensured in each multi story building for firefighting.
- Assure that all areas of the Town have the highest level of fire protection, at the lowest possible cost, to meet existing and future demand.
- Establishment of fire-stations to accommodate required number of fire vehicles.
- Establish sub-stations at different locations to ensure short response time for the whole city.
- Increase service efficiency through number of vehicles, dedicated staff and financial mechanism.
- To ensure readiness of all vehicles with ample stocks of POL and spares.

[38] Information provided by MC Office Hala

7.4.4 Priority project

- **Provision for the Fire Station**

Hala City does have firefighting services available to address emergency situations. Currently, there are two fire-fighting vehicles operational withing the Municipal Committee of Hala. However, to meet the city's fire-fighting needs effectively, an additional two fire-fighting vehicles are required as suggested by the MC Office. At present 02 fire brigade with equipment are present in Hala town. The sanctioned number of fire-fighting staff in Municipal Committee of Hala is 32. This team of actual fire-fighting staff is responsible for managing emergency fire incidents within the city. However, to ensure comprehensive fire-fighting coverage and readiness, an additional 48 fire-fighting staff members are needed in the Municipal Committee of Hala MC.

Improving the city's fire-fighting capabilities and expanding the number of vehicles and trained personnel is essential to enhance emergency response and better protect the lives and properties of the residents of Hala MC.

- **Scope**

- Assessment of existing fire-fighting facilities, vehicles, equipment, and human resources within the Municipal Committee (MC) and Town Committee (TC) of Hala.
- Provision and procurement of two additional fire-fighting equipment and tools to meet operational and safety standards.
- Establishment or strengthening of fire station facilities, including vehicle sheds, equipment storage, staff rooms, and basic operational infrastructure.
- Recruitment of additional fire-fighting staff to meet required manpower levels for effective citywide coverage.
- Capacity building and training of fire-fighting personnel in modern fire response, rescue operations, and emergency management.
- Improvement of response time and coverage for residential, commercial, industrial and public areas of Hala City.
- Integration of fire-fighting services with other emergency and municipal response mechanisms.
- Provision of safety gear and protective equipment for all fire-fighting staff.
- Development of an operation and maintenance framework to ensure sustainable functioning of the fire station and equipment.
- Coordination with relevant provincial and municipal authorities for staffing approvals, budgeting, and long-term service delivery.

- **Size**

- Citywide coverage serving the entire jurisdiction of Hala Municipal Committee and Town committee.
- Operational scale based on four-fighting vehicles (02 existing and 02 additional vehicles to be provided).
- Human resource capacity planned for 80 fire-fighting staff (32 existing sanctioned posts and 48 additional staff to be recruited).
- Infrastructure scale including fire station facilities, vehicle sheds, equipment storage areas, staff rooms, and administrative space.

- Equipment size sufficient to support multiple simultaneous fire and emergency incidents across residential, commercial, and public areas.
- Service capacity designed to improve response time, coverage radius, and operational readiness.
- Project size aligned with current urban extent of Hala City, with provision for future population growth and urban expansion.
- Implementation scale suitable for round-the-clock emergency operations and long-term sustainability of fire-fighting services.

➢ **SDG'S Alignment**

I. **SDG 3: Good Health and Well-Being:** Enhances community safety and reduces fatalities and injuries from fire incidents and emergencies.

II. **SDG 11: Sustainable Cities and Communities:** Improves urban resilience, emergency preparedness, and risk reduction measures in line with sustainable urban development principles.

➢ **Implementing Authority**

Government of Sindh, Municipal Committee and Town Committee Hala.

➢ **Preliminary Cost Estimate**
Estimate Cost: 50 Million Approx.

Estimated Cost of Fire and Emergency Services Projects – Hala

S. No.	Project Name	Estimated Cost in Millions	ADP	Non ADP	Status	
					Short Term	Long Term
Fire and Emergency Services						
1.	Establishment of Fire Station in Hala City	50	-	Non-ADP	Short Term	-

8. INFRASTRUCTURE

8.1 Transport and Communication

8.1.1 Existing Situation

- **Airport**

For the residents of Hala, the more practical option for air travel is Hyderabad Airport. The journey from Hala to Hyderabad Airport covers an approximate distance of 70 km, with a travel time of about 80 minutes. However, it's important to note that Hyderabad Airport is not currently functional. As a result, Hala mainly relies on Jinnah International Airport in Karachi, which is located 190 km away from Hala.

- **Railway**

The Hala Railway Station, a once-active landmark in Sindh's transport network, now stands abandoned and silent. Once integral to regional connectivity, the station has remained non-operational since the early 1980s, a result of historical unrest and shifting transportation priorities. Its closure marked the end of a significant era in Hala's railway history, leaving behind a structure that quietly reflects its former role.

Although the railway station no longer functions, Hala remains connected through the National Highway N-5, which links it to major cities like Hyderabad and Karachi. Local and regional buses operate frequently, offering residents and visitors reliable travel options. Auto rickshaws and taxis provide short-distance transportation, contributing to a flexible yet informal mobility system within the city.

While the railway tracks lie unused, the potential for future revival remains. Until then, road transport continues to serve as the backbone of Hala's connectivity, supporting its daily movement and regional access.

- **Inter City modes of Transportation**
  (Bus and Truck Stand)

Hala City currently lacks major bus and truck stands within its urban infrastructure. Inter-city bus services are limited and often operate without adherence to formal regulations or designated stands. The presence of illegal bus and Qingqi (auto-rickshaw) stands is noticeable in various parts of Hala. It's worth noting that unregistered Qingqis and rickshaws significantly outnumber registered buses, which presents a unique transportation challenge for the city.
While the city itself may lack prominent bus and truck stands, there are some observable stands located on the outskirts of town. These peripheral stands are important for serving the transportation needs of the city's residents.

In the absence of a formalized bus and truck stand system within town, residents often rely on alternatives. Some bus and van stops have been established, offering essential services to the commuting population. Notable stops include the Shaheed Makhdoom Ammar Haider, Dargha Road Stop, Bypass link Stand, and the Coach Bus Stand located near the Baghari bus Stand Road. Additionally, along the Mawasihi Mandi area, trucks and loaders are parked along Road, further adding to the transportation options within the city. These transportation hubs play a vital role in addressing the travel requirements of the people of Hala. However, the absence of proper infrastructure within the city remains a notable concern in this regard.

8.1.2 Local Road and traffic Network

- **Condition of Road**

Hala Town, the internal road network presents a fascinating, yet uneven, landscape. Major thoroughfares like Thanedar Bagh Road and Shahbaz Road exhibit commendable asphalt quality, facilitating commerce with their vibrant markets and shops. However, venturing onto Gulshan Colony Road or Mehran Road reveals a stark contrast, their surfaces etched with the wear and tear of time, demanding immediate attention.

This dichotomy persists throughout the town. Dargah Road, lined with essential services and banks, flaunts recent improvements, while Moti Masjid Road battles chronic drainage woes, its potholes echoing the monsoon's wrath. While Jeay Sindh Road and Bhittai Road offer smooth passage, Peerzada Colony Road and Sakhi Pir Road pose significant challenges with their narrow widths and inadequate lighting, hindering both vehicular and pedestrian flow.

This patchwork of progress and neglect necessitates a strategic intervention. Upgrading key intersections, implementing proper drainage system, and enhancing lighting on critical stretches like Moti Masjid Road and Sakhi Pir Road are crucial first steps. Widening narrow passages on Peerzada Colony Road and others becomes essential for improved traffic flow and pedestrian safety. Additionally, exploring ashphalt resurfacing projects for neglected roads like Gulshan Colony Road and Mehran Road will significantly enhance overall connectivity and resident experience.

Furthermore, drainage issues along the roadside contribute to the deterioration of roads. The absence of street furniture poses another challenge, leading to traffic incidents. Encroachments and disorganized/illegal Qinqui and Rickshaw stands are evident on the roadside, causing both on-street and off-street parking problems. Occasional institutional and religious gatherings further contribute to traffic congestion in the area. Addressing these issues in important for ensuring the safety and efficiency of the road network in hala town.

- **Traffic Volume Count (TVC)**

The survey was conducted in three stages, spanning a 12-hour period from 7:00 am to 7:00 pm, employing the Traffic Volume/Capacity (TVC) analysis. Enumerators executed the survey with a focus on six major traffic congestion points at each selected location. The study utilized a TVC + Break + TVC pattern for a comprehensive understanding of the traffic dynamics.

Traffic Volume Count (TVC) in Hala provides a comprehensive overview of the composition and distribution of various types of vehicles within the surveyed area. Motorcycles constitute the majority, representing 53.45% of the total, followed by 28.89% of Qingqi Rickshaws, and 12.55% of Cars/Taxi/Jeeps. Light Vans/Passenger Pickups, Mini Buses/Coasters, Buses, and Trucks/Tankers contribute to the traffic with smaller percentages, while Loading Pickups/Mini Trucks, Non-Motorized vehicles, and other categories make up the remaining share.

Further analysis of the percentage distribution of PCUs shows that motorcycles account for 53.45%, reaffirming their dominant presence in the traffic flow. Other categories contribute to varying degrees, with Bicycles and Animal Carts representing the smallest percentages.

In conclusion, the TVC summary provides valuable insights into the traffic composition in Hala, emphasizing the prevalence of motorcycles and Rickshaws. These findings underline the need for traffic management measures, improved regulation of para-transit operations, and planning interventions aimed at enhancing safety, efficiency, and overall mobility within the urban road network**.**

- **OD Survey**

An Origin-Destination (OD) survey was conducted to understand the travel patterns of residents within the city. The travel time distribution to shopping and work/office is similar, the majority of respondents taking 15 minutes or less to reach their destination. The travel time distribution to school is slightly different, with a larger proportion respondents taking 10 minutes or less to reach their destination. The travel time distribution to hospital, with a large proportion of respondents taking 20 minutes or less to reach hospital.

The overall travel time distribution in the city is relatively flat, with small number of respondents taking significantly longer than the average travel time. This suggests that there is a high degree of variability in travel times within the city. The travel time distribution to shopping and work/office is similar, while the travel time distribution to school and hospital is slightly different.

Given the quantified deficits in connectivity, inconsistent road conditions, inadequate public transport infrastructure, and rising population pressures, the transportation strategy must prioritize (i) rehabilitation and upgrading of existing road networks and drainage systems to ensure safety and durability; (ii) expansion and formalization of public transport facilities, including bus and truck stands, to improve accessibility and reduce congestion; and (iii) integration of traffic management solutions to address parking encroachments, and congestion issues.

8.1.3 Issues and Problems

- No formal Bus Terminal
- Minor roads in poor condition due to asphalt issues and insufficient maintenance.
- Traffic Congestion at intersections
- Station Road: Another tertiary minor road in bad condition due to asphalt problems.
- Unavailability of Traffic signals and street furniture

- Lack of Road Safety
- Unregularized Qinqui system
- Drainage and parking issues
- The ring road's incomplete connection on the northern side due to the absence of a flyover over the railway track reduces overall network efficiency

8.1.4 SWOT analysis

The need assessment confirms that the transportation response cannot rely solely on new infrastructure development; it must be delivered through a two-track approach: (i) rehabilitation and functional upgrading of existing road networks, drainage, and safety features; and (ii) targeted expansion and formalization of transit facilities, traffic management, and connectivity improvements. This phased strategy supports both immediate service continuity and long-term mobility and accessibility goals aligned with population growth projections.

LAND USE &TRANSPORTATION			
Land Use Pattern & Transportation			
Strength	**Weakness**	**Opportunity**	**Threats**
1. Multifaceted development. 2. Mixed land uses (residential, commercial, industrial, administration). 3. Strategic Location. 4. Railway Connectivity. 5. The city boasts a comprehensive road infrastructure, including a ring road, which enhances connectivity within and beyond the city limits. 6. Diverse Transportation options.	1. Incomplete Infrastructure. 2. Poor Road Conditions 3. Lack of Formalized Bus and Truck Stands. 4. Drainage and Parking issues.	1. Infrastructure Development. 2. Regulatory Enforcement. 3. Integration of Technology. 4. Public Awareness and Participation.	1. Rapid Urbanization. 2. Budgetary Constraints. 3. Political instability and social unrest may disrupt transportation operations and infrastructure development initiatives, hindering progress. 4. Environmental Concerns.

8.1.5 Policy Guidelines

- Decrease in private vehicles, especially during peak hours and in CBD areas.39
- Decrease in traffic delay.
- Decrease/stability in air and noise pollution.
- Involvement of private sector in transportation infrastructure and services projects.20
- Infrastructure development and up-gradation.
- Integration of public transport services and networks.
- Modernize goods transport and freight facilities.
- Planning for Unplanned Street network
- Measures to provide effective public transport
- Ribbon type commercial development in residential neighborhoods.
- Provision of parking space for rest hours for drivers.
- provision of street furniture
- Removal Encroachments around bus bays and railway land sites

8.1.6 Sindh Empowerment of 'Persons with Disabilities' Act, 2018 [40]

Keeping in view 'Persons with Disabilities' act, 2018 while planning, designing & executing any kind of infrastructure projects i.e. public places, markets, parks, educational institutions, health facilities, Roads Street and pathways centers and etc., it is now mandatory to apply Universal Design and Accessibility criteria for ease of access of differentially abled persons. Also, during the planning & designing phase universal guidelines for differently abled friendly construction should adhered for e.g. provision of ramps, specialized tiles (Tactile Paving) used for visually impaired personals, signage, street furniture, foot path steps, parking, mechanical access, railings, opening of doors & windows, toilet design, lighting and illumination and etc.

Specifically planning & designing for the transport sector, universal access is the goal of enabling all citizens to reach every destination served by their public streets and pathway system. Universal access is not limited to access by persons using automobiles. Travel by bicycle, walking, or wheelchair to every destination is accommodated in order to achieve transportation equity, maximize independence, and improve community livability. Wherever possible, facilities are designed to allow safe travel by young, old, and disabled persons who may have diminished perceptual or ambulatory abilities. The universal design has following principles;

i. Universal access to destination:

All destinations served by the public road system shall be accessible by pedestrians and by drivers of all vehicles (including bicycles), except that vehicle operation may be restricted for

[39] Sustainable Urban Transport Policy-Sindh 2016

[40] For detail please refer; The Sindh Empowerment of 'Persons with Disabilities' Act, 2018 (https://depd.sindh.gov.pk/sindh-empowerment-of-persons-with-disabilities-act-2018)

reasons of excessive weight, noise or size, or extraordinary potential for damage to property or person

ii. **Equal Right of use:**

People's right to use that portion of a street designed for travel is not diminished by less weight, less size, or less average speed associated with their travel mode. Demand actuated tra-c signals must detect and serve a diversity of users including bicycle operators in the roadway and pedestrians using crosswalks.

iii. **Accessible surfaces:**

To the extent practicable, travel surfaces should accommodate travel on foot with minimal trip hazards and via common assistive devices such as wheelchairs. Roadway surfaces should be as clear as possible of hazards for narrow tires such as bicycle wheels.

iv. **Crossable Roadways:**

Crossing distances at non-signalized access locations must not exceed the distance that can be covered at walking speed before tra-c may arrive from beyond sight distance, or during reasonable gaps in roadway tra-c. Refuges provided to reduce crossing distances should be large enough to store assistive devices such as wheelchairs and strollers. Tra-c signal timing should provide adequate clearance intervals for safe crossing by pedestrians and slow vehicles.

It is suggested that necessary provision of the above recommendation may be mandated in the laws and regulations of SBEA and other agencies which drafting the buildings and highway regulations

8.1.7 Strategic Development Plan

The aim of strategic development plan is envisions providing equal and equitable sustainable transport system to all groups of society on affordable basis with minimal impacts on environment, also Provision of Citizen-centric, Sustainable and Growth Oriented Modern Transport system and rehabilitation of existing roads.

i. **Long Term**

- Create Traffic Engineering Bureaus (TEBs) at divisional level to perform functions as specified in Karachi Division (Traffic Engineering) Act 1985.
- Environmental Impact Assessment (EIA) should be mandatory for all transportation projects.
- Declaring private vehicle free zones, especially in peak hours, in CBD areas to reduce noise and air pollutions.
- Satisfy mobility needs via integration of existing and planned routes, services and Infrastructure.
- Implementation of Axle Load Management.
- Dualization of main arteries.
- Improvement of existing roads geometry

ii. **Short Term**

- Improve road design to make safer roads.
- Prevent encroachments on footpaths through litigation.
- Rehabilitation of Farm to Market road network.
- Reduce traffic growth and congestion by achieving a mode shift.

To reduce congestion in commercial corridors and protect the core city from unnecessary through-traffic, the short-term strategy will implement a traffic re-routing plan that:

  - Directs regional through-traffic and heavy vehicles to bypass corridors (where feasible) and restricts their movement in the core during peak hours.
  - Implements time-based management (peak-hour control) for freight loading/unloading and para-transit staging in commercial areas.
  - Establishes one-way/loop circulation arrangements on the most congested inner-city links (where road widths and ROW allow), supported by signage and enforcement.
  - Creates diversion routes during road rehabilitation works, with clear temporary signage and staged execution to maintain access to markets, schools, and emergency services.
- Establishes designated on-street parking bays on selected corridors through marking, lane discipline, and removal of encroachments.
- Provides off-street parking pockets near markets, and high-demand nodes through municipal land identification and PPP options where viable.
- Introduces managed curb-side parking (including metered/regulated parking in selected commercial areas) and reinvests revenue into O&M and traffic management.
- Allocates rest parking space for drivers near formalized terminals and staging areas to reduce random truck/bus parking along roadside corridors.

Transportation interventions will be integrated with municipal infrastructure planning particularly road connectivity, drainage systems, public transit facilities, traffic management, pedestrian access, and safety measures. This integration will fully incorporate the provisions of Sindh Empowerment of 'Persons with Disabilities' Act, 2018, ensuring universal design and accessibility for differently-abled persons across all transport infrastructure. Additionally, adherence to policy guidelines-including traffic reduction in peak hours, formalization of transport hubs, improvement of road safety, and promotion of sustainable transport modes will enhance mobility, reduce congestion, improve accessibility for all users, and strengthen resilience against flooding and other disruptions, thereby ensuring an efficient, inclusive, and sustainable transport system for Hala City.

8.1.8 Priority Projects:

- **REHBILATATION OF ROADS NETWORK**

Hala Town's road network suffers from uneven development, with many roads like Gulshan Colony Road, Mehran Road, and Moti Masjid Road in poor condition due to aging infrastructure, drainage issues, and lack of lighting. The situation was further worsened by the 2022 floods, which caused severe damage to both primary and secondary roads, disrupting mobility and emergency response.
Encroachment, unregulated rickshaw stands, and parking issues also contribute to traffic congestion and safety concerns. Rehabilitating the road network is essential to restore connectivity, improve safety, enhance drainage, and support daily economic and social activities.

- **Scope**

  - Detailed assessment of the existing road network in Hala Town, including primary and secondary roads such as Gulshan Colony Road, Mehran Road, and Moti Masjid Road.
  - Rehabilitation and reconstruction of flood-damaged roads, with improved pavement layers and durable materials to enhance resilience.

- Upgradation of road surfaces to ensure smooth and safe movement for both vehicles and pedestrians.
- Improvement and integration of roadside drainage systems to prevent waterlogging and extend road life.
- Installation and upgradation of street lighting to enhance road safety, especially during nigh hours.
- Road widening and geometric improvements at selected locations to reduce congestion and improve traffic flow.
- Provision of pedestrian facilities such as footpaths, crossings, and safety signage.
- Improved access to key destinations including markets, schools, healthcare facilities, and residential neighborhoods.
- Incorporation of climate-resilient design standards to mitigate future flood impacts.
- Coordination with municipal and traffic authorities for effective implementation, operation, and maintenance of the rehabilitated road network.

➢ **Size**

- Rehabilitation of selected primary and secondary roads, across Hala Town, including major corridors such as Gulshan Colony Road, Mehran Road, and Moti Masjid Road.
- Project coverage will extend to flood-damaged, deteriorated, and high-traffic roads, with flexibility to include any additional roads found to be in poor condition during implementation.
- Road rehabilitation will include resurfacing, strengthening of pavement layers, and localized reconstruction where structural failure is observed.
- The project size will accommodate varying roads widths, depending on existing right-of-way, traffic demand, and urban context.
- Associated infrastructure such as side drains, street lighting, signage, road markings, and pedestrian facilities will form part of the rehabilitation works.
- Coverage includes key access routes to markets, schools, healthcare facilities, and residential neighborhoods.
- Implementation will be carried out in phases, prioritizing critically damaged and high-use roads.
- Design standards will be suitable for current traffic volumes, with provision for future growth and climate – resilient performance.
- Overall project size is aligned with municipal capacity and available funding, allowing scalability based on detailed engineering assessments.

➢ **SDG'S Alignment**

I. GOAL 8 – Decent work and economic growth

Reliable roads are essential for economic productivity, access to employment, and transport of goods and services. The rehabilitation process itself will also create local employment opportunities, contributing to SDG 8.5 and 8.9 (productive employment and promotion of sustainable local economic development).

II. GOAL 11 – Make cities and human settlements inclusive, safe, resilient and sustainable

The project aligns directly with SDG 11.2 (providing access to safe, affordable, accessible and sustainable transport systems) and SDG 11.6, which focuses on reducing the negative environmental impact of cities. Improved road infrastructure strengthens urban connectivity, safety, and resilience.

- **Implementing Authority:** Works and Service Department government of Sindh, Local Government
- **Estimated Cost: 300 million Approx.**

- **INSTALLATION/ REHABILITATION OF STREET LIGHTING ON ROADS**

Most of the Streets of Hala city are without street lights in over all the city and all roads are devoid of this facility. Street Lighting is essential for safe maneuvering of vehicles at night time and enhance sense of security of pedestrians on roads in dark hours. Given the energy crisis in the country, it is recommended to have solar street lights on streets and major roads.

- **Scope**

- Assessment and mapping of existing streets and roads in Hala City lacking street lighting facilities.
- Planning and design of citywide solar street lighting system for streets, major roads intersection, and public spaces.
- Installation of solar – powered street lights to enhance nighttime visibility and road safety for vehicles and pedestrians.
- Prioritization of lighting along main roads, residential streets, markets, schools, healthcare facilities, and public areas.
- Provision of energy-efficient lighting systems with appropriate pole height, spacing, and illumination standards.
- Incorporation of safety features such as anti-glare design and adequate coverage to reduce accidents and crime risks.
- Use of renewable energy technology to reduce reliance on the electricity grid and address energy shortages.
- Inclusion of operation and maintenance arrangements, including battery management and periodic system checks.
- Design provisions for long-term durability, low maintenance and resistance to weather and environmental conditions.
- Coordination with municipal authorities for implementation, monitoring, and sustainable management of the street lighting system.

- **Size**

- Citywide coverage encompassing all major roads and residential streets of Hala City currently without street lighting.
- Installation of solar-powered street lights along primary roads, secondary roads, and internal streets.
- Project scale designed to provide continuous and uniform lighting coverage at key locations such as intersections, markets, schools, healthcare facilities, and public spaces.
- Number of street lights to be installed will be determined based on road length, pole spacing standards, and lighting requirements.
- System capacity sufficient to ensure night-long illumination using solar energy and battery storage.
- Implementation size planned in phases, prioritizing high-traffic and high-risk areas.
- Infrastructure scale aligned with urban road hierarchy and future city expansion.

- Overall project size designed to support sustainable, low-maintenance, and energy-efficient urban lighting infrastructure for Hala City.

➢ **SDG'S Alignment**

I. Goal 7 – Affordable and clean energy

Installing solar-powered street lights contributes to SDG 7.2 (increase the share of renewable energy in the global mix) and SDG 7.3 (improve energy efficiency). This project supports the transition to clean energy in public infrastructure.

II. GOAL 8 – Decent work and economic growth

Street lighting extends business operating hours, improves night-time productivity, and enhances job security for informal workers, aligning with SDG 8.3 and 8.5, which focus on promoting inclusive and sustainable economic growth and employment.

III. GOAL 11 – Make cities and human settlements inclusive, safe, resilient and sustainable

This project directly aligns with SDG 11.2 (access to safe, affordable, and sustainable transport systems for all) and SDG 11.7 (providing safe, inclusive, and accessible public spaces). Street lighting enhances urban livability and promotes equitable access to services and spaces after dark

➢ **Implementing Authority**

New Hala MC & Old Hala TC, Government of Sindh

➢ **Preliminary Cost Estimate**

Estimate Cost: 200 million Approx.

➢ **CONSTRUCTION OF HALA BUS TERMINAL**

At the present, there is no any bus terminal in Hala, traffic is congested due to illegal parking of local, being a central point, and it connects Karachi and sukkur with each other. Therefore, a bus terminal is proposed on 41 acres with parking capacity of ~650-850 buses. Proposed location should be outside the city. The bus terminal will have all the facilities like restaurants, mosque, toilets and banks etc.

➢ **Scope**

- **Planning and Feasibility**
  - Conduct feasibility and transport demand assessment studies
  - Finalize site selection based on connectivity, future expansion, and flood-resilience
- **Site Development and Terminal Facilities**
  - Construction of raised terminal platforms (minimum 0.6 m above Highest Flood Level)
  - Dedicated bus bays for intercity and intra-city routes
  - Organized parking and staging areas to remove on-street bus stopping
- **Passenger and operational Facilities**
  - Ticketing counters, waiting lounges, information kiosks
  - Universal accessibility features including ramps, tactile surfaces, and accessible washrooms

- Mosque/prayer area, food court/restaurant, banking/ATM services, toilets
- Terminal administration block, backup power supply and security surveillance

- **Infrastructure and Environmental Measures**
  - Internal roadway circulation with designated pick-and-drop zones
  - Drainage network integrated for flood-resilient operations
  - Lighting infrastructure (solar-powered priority)
  - Clear signages, pedestrian sidewalks, and landscaping to ensure safety and comfort

➢ **Size**

The Project will cover the development of new bus terminal facility on a procured site located outside the urban core, with capacity for organized bus parking, passenger amenities, and future operational expansion, ensuring reliable and efficient transport connectivity for present and projected urban mobility needs.

➢ **SDG's Alignment**

I. **Goal No.8: Decent Work and Economic Growth**

To promote inclusive and sustainable economic growth, employment, and decent work for all, enhancing the economic productivity through diversification, technological upgrading, and innovation, while improving global resource efficiency in consumption and production.

II. **Goal No.11: Make Cities and Human Settlements Inclusive, Safe, Resilient and Sustainable**

To enhance urban and suburban areas within cities, making them inclusive, safe, resilient, and sustainable through improved urban planning and management that incorporates the participation of the community.

➢ **Implementing Authority**

Government of Sindh, Hala Municipal Committee and Works and Services Department.

➢ **Estimated Cost: 200 million PKR Approx.**

➢ **CONSTRUCTION OF TRUCK TERMINAL**

Hala City currently does not have a dedicated truck terminal, despite the clear need for one. At present, goods are loaded and unloaded along both sides of the city's roads, where heavy vehicles like truck, tractor trolleys, and camel carts are commonly parked. This practice leads to major traffic disruptions and creates significant inconvenience for residents and visitors involved in shopping, business, office work, or leisure activities. Without a proper terminal, freight operates and local businesses are left to depend on informal and often inefficient methods for handling goods.

To address this issue, a 65-acre truck terminal is proposed in Hala City, strategically located along the Hala-Shahdadpur Road. The terminal is designed to accommodate a large number of freight vehicles, helping to ease congestion caused by the current lack of dedicated facility. It will include essential infrastructure such as restaurants, a mosque, public toilets, banks, and other amenities to support both truck drivers and commercial operations, thereby improving the overall efficiency of goods transportation in region.

➢ **Scope**

- **Site Planning and Land Development**
  - Planning and development of a 65-acre truck terminal along the Hala–Shahdadpur Road at a strategically accessible location
  - Land grading, leveling, and demarcation of functional zones within the terminal
  - Provision for future expansion and phased development
- **Truck Parking and Freight Handling Facilities**
  - Development of designated parking areas for trucks, tractor trolleys, and other freight vehicles
  - Construction of organized loading and unloading bays to support efficient goods handling
  - Provision of circulation roads within the terminal for smooth vehicle movement
- **Supporting Commercial and Service Infrastructure**
  - Development of restaurants, tea stalls, and rest areas for drivers and transport staff
  - Construction of a mosque and provision of ablution facilities
  - Provision of public toilets with adequate water supply and sanitation
  - Allocation of space for banks, ATMs, and small commercial services
- **Traffic and Access Management**
  - Development of controlled entry and exit points connected to the Hala–Shahdadpur Road
  - Installation of internal traffic signage, lane markings, and speed control measures
  - Integration with the city's road network to divert heavy vehicles away from urban streets
- **Utilities and Infrastructure Services**
  - Provision of water supply, electricity, drainage, and solid waste management systems
  - Installation of street lighting throughout the terminal for safety and nighttime operations
  - Provision of firefighting and emergency response facilities
- **Environmental and Safety Measures**
  - Implementation of environmental management measures to control dust, noise, and emissions
  - Landscaping and buffer zones to minimize impact on surrounding areas
  - Provision of safety features including fencing, security posts, and surveillance systems
- **Administration and Management Facilities**
  - Construction of administrative offices for terminal management and operations
  - Provision of security, monitoring, and enforcement mechanisms
  - Establishment of operational guidelines for parking, freight handling, and service use
- **Socio-Economic and Operational Integration**
  - Support to local traders and transport operators through organized freight services
  - Employment generation during construction and operational phases
  - Integration of the truck terminal into Hala City's long-term transport and logistics planning

➢ **Size**

- Development of a large-scale truck terminal covering an area of approximately 65 acres along the Hala-Shahdadpur Road.
- Provision of organized parking facilities for 500-700 freight vehicles, including trucks, tractor trolleys, and other heavy transport modes.
- Construction of multiple loading and unloading bays designed to handle bulk goods efficiently and reduce turnaround time.

- Development of an internal road network and circulation system to support smooth movement of heavy vehicles within the terminal.
- Allocation of designated zones for commercial and services facilities, including restaurants, mosque, public toilets, banks/ATMs, and driver rest areas.
- Installation of basic utilities and infrastructure, including water supply, electricity, drainage, solid waste management, and street lighting across the entire terminal.
- Provision of security, administrative, and management facilities to support day-to-day terminal operations.
- The project will serve Hala City and surrounding districts, significantly reducing heavy vehicle intrusion into urban areas and improving freight transport efficiency, with capacity for future expansion within the 65-acre site.

➢ **SDG's Alignment**

I. **Goal No.8: Decent Work and Economic Growth**

Construction and operation of the truck terminal will create jobs in transportation, facility management, hospitality, and maintenance, contributing to SDG 8.3 and 8.5, which aim to support productive employment and inclusive economic growth.

II. **Goal No.11: Make Cities and Human Settlements Inclusive, Safe, Resilient and Sustainable**

By reducing congestion and improving the efficiency of freight movement, the project supports SDG 11.2, which focuses on providing access to safe, affordable, and sustainable transport system for all.

➢ **Implementing Authority**

Government of Sindh, Works and Services Department and Hala MC.

➢ **Preliminary Cost Estimate**

Estimate Cost: 250 million Approx.

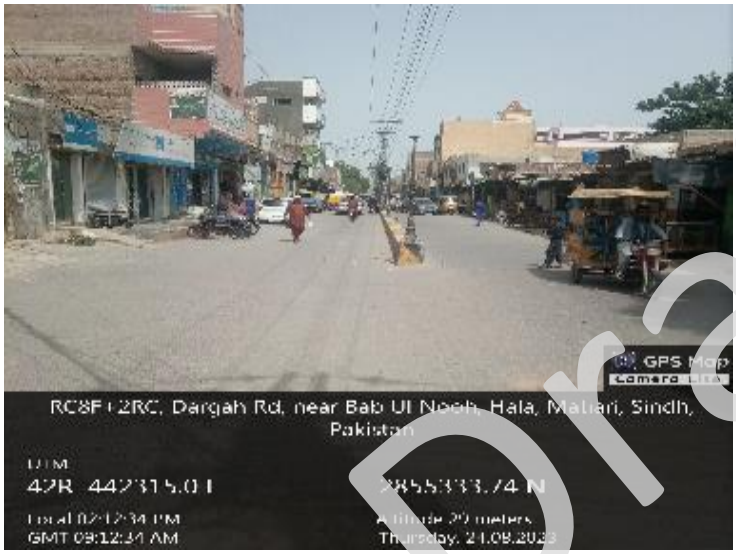
S. No.	Project Name	Estimated Cost in Millions	ADP	Non ADP	Status	
					Short Term	Long Term
Roads and Communication Network						
1	Beautification & Rehabilitation of Major Urban Roads includes secondary and tertiary roads	300	-	Non ADP	**Short Term**	-
2	Installation/Rehabilitation of new solar Street Lighting On main roads and streets.	200	-	Non ADP	**Short Term**	-
3	Feasibility study for Hala Bus Terminal	50	-	Non ADP	**Short Term**	
4	Procurement for land for Hala Bus Terminal	200	-	Non ADP	**-**	**Long Term**
5	Feasibility study for Truck Terminal in Hala city	50	-	Non ADP	**Short Term**	-
6	Land Procurement for Truck Terminal in Hala City	200	-	Non ADP	**-**	**Long Term**

8.1.9 Immediate Action Plan

- **Rehabilitation of Core Area Roads and Traffic Management in Hala**

An immediate action plan for the core urban area in Hala Municipal Committee (MC) And Hala Committee (TC) necessitates the restoration of the right of way on roads by removing all encroachments along the main roads like dargah road, court road. This will improve traffic flow, enhance safety, and create a more organized urban environment.

The Immediate Action Plan focuses on restoring and upgrading core roads, reorganizing roadside activities, introducing structured parking, and ensuring safe pedestrian mobility. These interventions will ease traffic flow, improve safety, and enhance the efficiency of transport system, in line with SDG 11.2 (access to safe, affordable, and sustainable transport).



on -street parking

ENCROACHMENT IN THE COMMERCIAL AREA

- **Scope**

The transportation improvement plan will include the following key actions:

- **Repair & Rehabilitation of Existing Roads:** Resurfacing, strengthening, and widening where necessary.
- **Road Safety Improvements:** Clear markings, signage, pedestrian crossings, and traffic signals.
- **Green Medians & Streetscape:** Development of medians and plantation to improve aesthetics and reduce heat at Dargah Road, Court Road and Old Hala Road.
- **Street Furniture Installation:**
    - Street Lighting: Wall-mounted Street lights at regular intervals for safety.
    - Zebra Crossings: Clearly marked crossings in pedestrian-heavy areas.
    - Roundabout Rehabilitation: Redesign and upgrade of roundabouts for smoother traffic and pedestrian safety.

- Benches & Seating Areas: Comfortable seating at regular intervals to encourage walkability.
- Bus Bays & Public Transport Facilities: Rehabilitation of bus stops and provision of waiting areas.
- Parking Management: Introduction of curb-side parking meters and designated parking areas.
- Community Engagement: Awareness campaigns to build ownership and reduce resistance to road realignment.

➢ **Size:**

The road repair and rehabilitation program within the core urban area of Hala MC & TC will cover a total 17 major and minor roads, comprising key urban and intercity linkages. The combined length of these roads is approximately 15.59 kilometers, covering an estimated area of 153,293 square meters.

Table 8-1: Hala Core Urban Area Repair & Rehabilitation of Roads

Hala- Core Urban Areas Repair & Rehabilitation of Roads								
S.No	**Area / Locality / Address Major Roads**	**Length (km)**	**Length (m)**	**Width (feet)**	**Width (m)**	**Area (sq.m)**	**Per sq.m cost (PKR)**	**Total Cost (PKR)**
1	Dargah Road	1.50	1500.11	60	18.28	27,420	10,764	295
2	Massan Road	1.00	996.12	20	6.096	6,072	10,764	65
3	Old Hala Road	0.64	641	30	9.14	5,859	10,764	63
4	Talib ul Mola Road	0.29	288	15	4.57	1,316	10,764	14
5	Imam Bargah Road	0.50	502.11	30	9.14	4,589	10,764	49
6	old Hala Road	0.91	914.24	20	6.096	5,573	10,764	60
7	River Road Hala Road	2.76	2759.36	50	15.24	42,053	10,764	453
8	Hala-Tando Adam Road	0.53	526.22	25	7.62	4,010	10,764	43
							Total PKR Rs. Million (A).	1,042
Minor Roads								
1	Makhdoom Ammar Haider Road	1.07	1067.91	25	7.62	8,137	10,764	88
2	Bypass Link Road	0.57	570.27	35	10.66	6,079	10,764	65
3	Bargharhi Bus Stand Road	1.16	1158.14	35	10.66	12,346	10,764	133
4	Qazi Moula Road	1.57	1567.83	10	3.048	4,779	10,764	51
5	Sawari Road	1.29	1291	25	7.62	9,837	10,764	106
6	Moula Sarwari Road	0.42	416.19	30	9.14	3,804	10,764	41
7	Old Hala Landhi Road	0.54	543.31	25	7.62	4,140	10,764	45
8	Graveyard Road	0.27	273.24	25	7.62	2,082	10,764	22
9	Court Road	0.57	568.63	30	9.14	5,197	10,764	56
							Total PKR Rs. Million (B).	**607**
							Total PKR Rs. Million (A+B).	**1,649**

- **Preliminary cost estimate**

A preliminary cost estimate will be provided, itemizing the costs associated with each of the activities listed above. The cost breakdown includes:

- **Major Roads Rehabilitation (A)**
- **Minor Roads Rehabilitation (B)**

Total Estimated Cost: 1,649 million

- **Implementation Framework**
- **Funding Sources:**
  - Municipal budgets for maintenance.
  - Provincial ADP grants for rehabilitation and transport development.
  - Parking revenue from meters reinvested into O&M.
  - Public-Private Partnerships (PPP) for parking management and possible key corridors
- **Execution:** Works executed by the Works & Services Department in coordination with the Municipal Committee.
- **Phasing:** Priority to congested corridors

Solar Street light

Carpeted Road after Immediate Action Plan

- **Pedestrian Movement**
- **Improvement of Pedestrian Movement and Street Furniture**

Promoting safe and accessible pedestrian movement is essential for the livability of Hala's core urban area. Currently, footpaths are broken, encroached, or absent, making walking difficult and unsafe. On-street parking further reduces pedestrian space, while the absence of adequate street furniture and crossings limits walkability.

The Immediate Action Plan focuses on restoring footpaths, prohibiting on-street parking in key zones, and providing safe pedestrian crossings and well-designed street furniture. These interventions will encourage walking, enhance safety, and create a more organized and people-friendly environment in line with SDG 11.2 (sustainable transport) and SDG 11.7 (safe, inclusive public spaces).

BROKEN ROAD

ROAD SIDE ENCROACHMENT

Road Side encroachment

Broken Road

- **Scope**

The pedestrian movement and street furniture improvement plan will include the following key actions:

- **Footpath Restoration:** Restore and enhance footpaths on both sides of the roads in the city center, particularly in the Central Business District (CBD) area. This will involve resurfacing, widening where necessary, and ensuring that all footpaths are free of obstacles.
- **On-Street Parking Prohibition:** Prohibit on-street parking in key areas to reduce congestion and repurpose the space for essential functions such as public transport lanes, emergency service routes, and pedestrian walkways.
- **Removal of Unauthorized Structures:** Systematically identify and remove all unauthorized structures and obstructions on roadways and pedestrian areas to restore their intended use and ensure unobstructed pedestrian movement.
- **Installation of Street Furniture:** Install essential street furniture in core urban areas, including:
    - **Street Lights:** Install wall-mounted street lights at regular intervals to improve visibility and safety for pedestrians during evening hours.
    - **Zebra Crossings:** Implement clearly marked zebra crossings at key intersections and pedestrian-heavy areas to enhance safety.
    - **Roundabout Rehabilitation:** Upgrade and rehabilitate existing roundabouts to improve traffic flow and pedestrian safety.
    - **Benches and Seating Areas:** Provide comfortable seating areas along pedestrian routes to encourage walking and provide rest points.

- **Size:**

The size and scope of the pedestrian movement improvements are outlined as follows:

Proposed street lights			
S. No.	**Name**	**Length (m^2)**	**Cost (PKR)**
1	Proposed Total Length of Street (km) for streets lights.	4992	100
		Total Cost (PKR). Million	**100**

Note:

- Street lights will be placed at a distance of 20 feet apart.
- Each street light is estimated to cost [Insert cost per unit].
- The total number of street lights required will be determined based on the total length of streets in the core town area.

- **Preliminary cost estimate**

Total Estimated Cost: 100 million PKR Approximately

Model of Roundabout

Model of Walkway with street Lights

- **Implementation Framework**
  - **Funding:** Municipal budgets, provincial ADP grants for urban safety, and PPP for installation and O&M of furniture and lighting.
  - **Execution:** Works executed by the Municipal Committee in coordination with the works & Services Department.
  - **Community Role:** Traders associations and local CBOs to support encroachment removal and pedestrian policy enforcement.

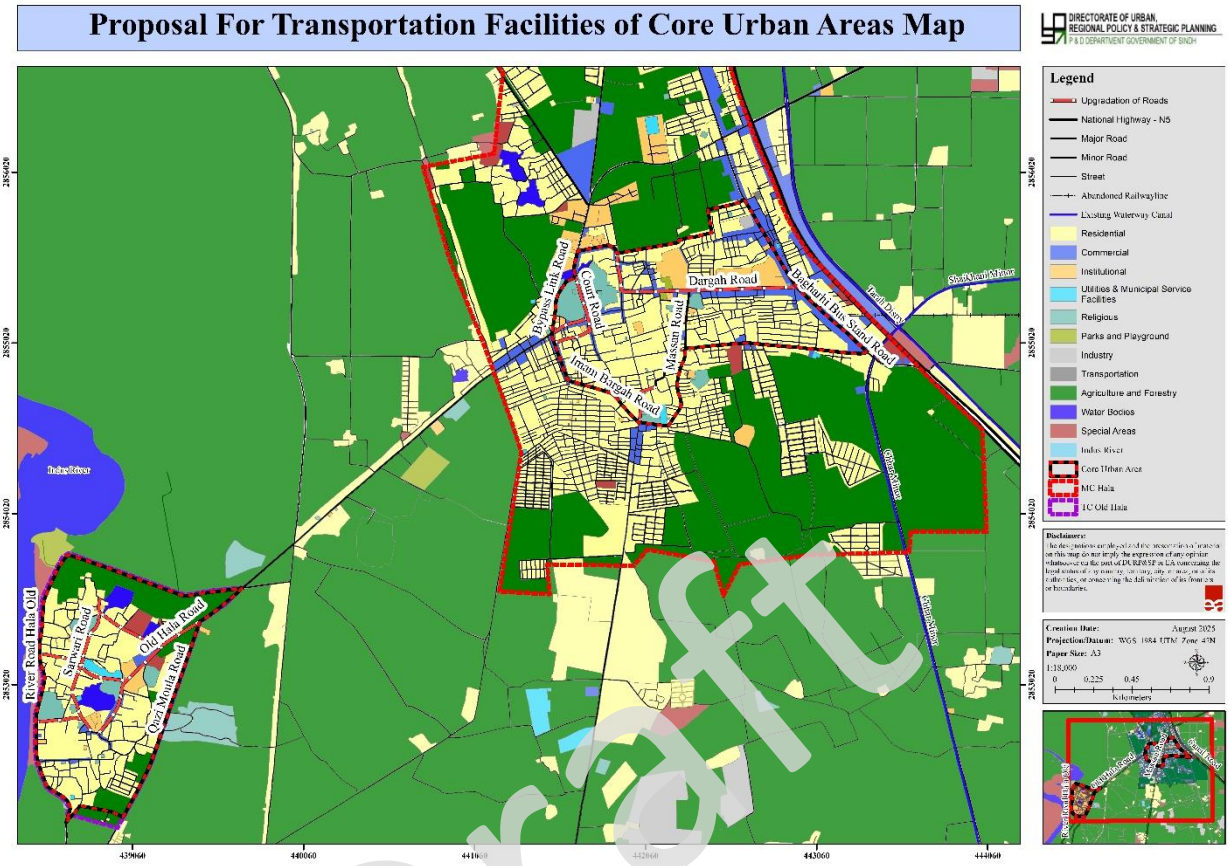
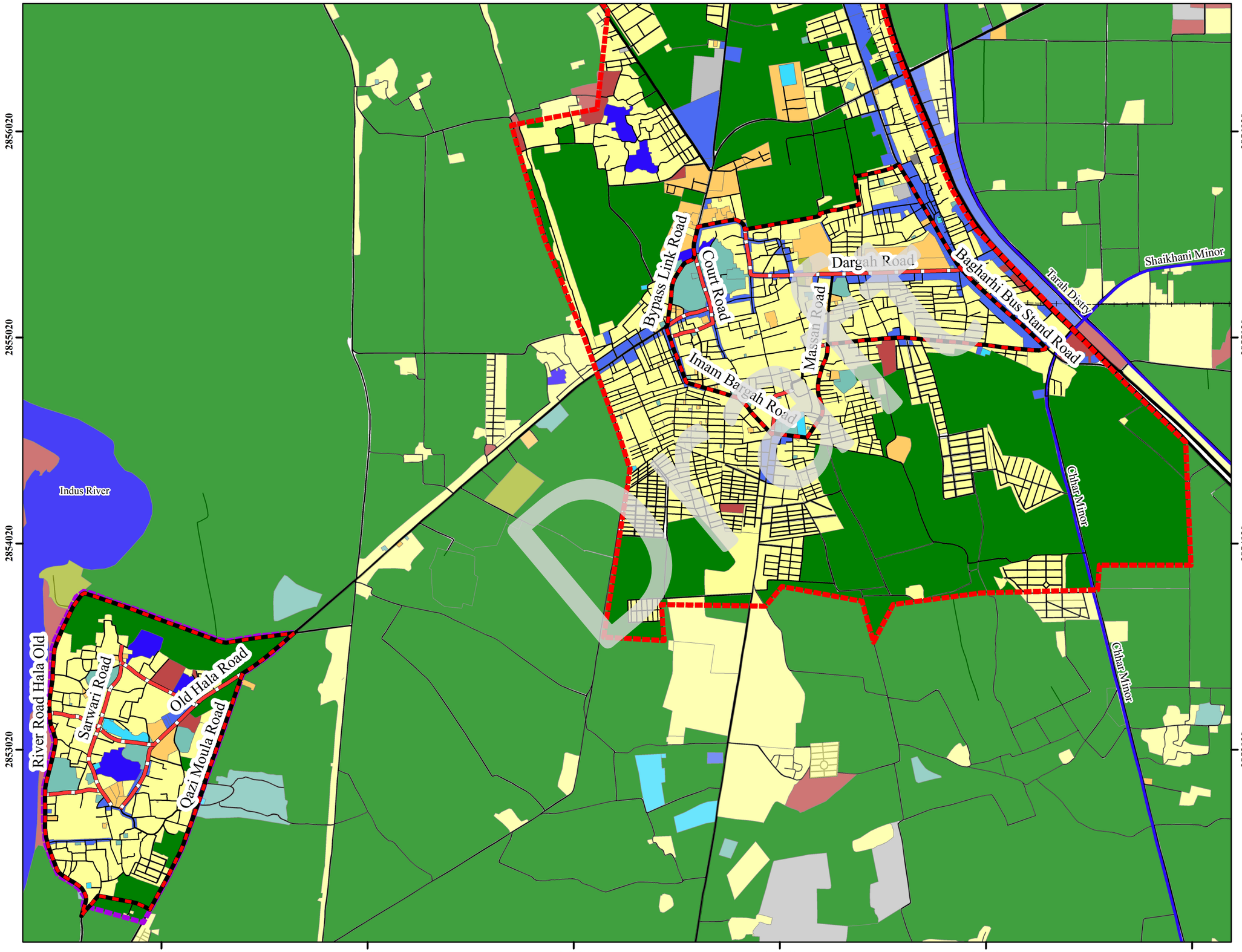


Figure 8-1: Boundary of core urban area

Proposal For Transportation Facilities of Core Urban Areas Map

DIRECTORATE OF URBAN, REGIONAL POLICY & STRATEGIC PLANNING
P & D DEPARTMENT GOVERNMENT OF SINDH



Legend

- Upgradation of Roads
- National Highway - N5
- Major Road
- Minor Road
- Street
- Abandoned Railwayline
- Existing Waterway Canal
- Residential
- Commercial
- Institutional
- Utilities & Municipal Service Facilities
- Religious
- Parks and Playground
- Industry
- Transportation
- Agriculture and Forestry
- Water Bodies
- Special Areas
- Indus River
- Core Urban Area
- MC Hala
- TC Old Hala

Disclaimers:

The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of DURP&SP or EA concerning the legal status of any country, territory, city, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

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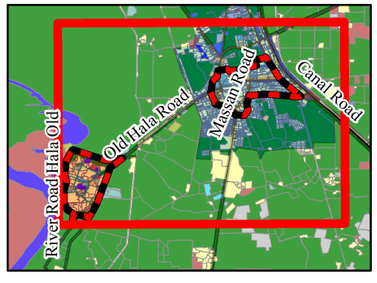


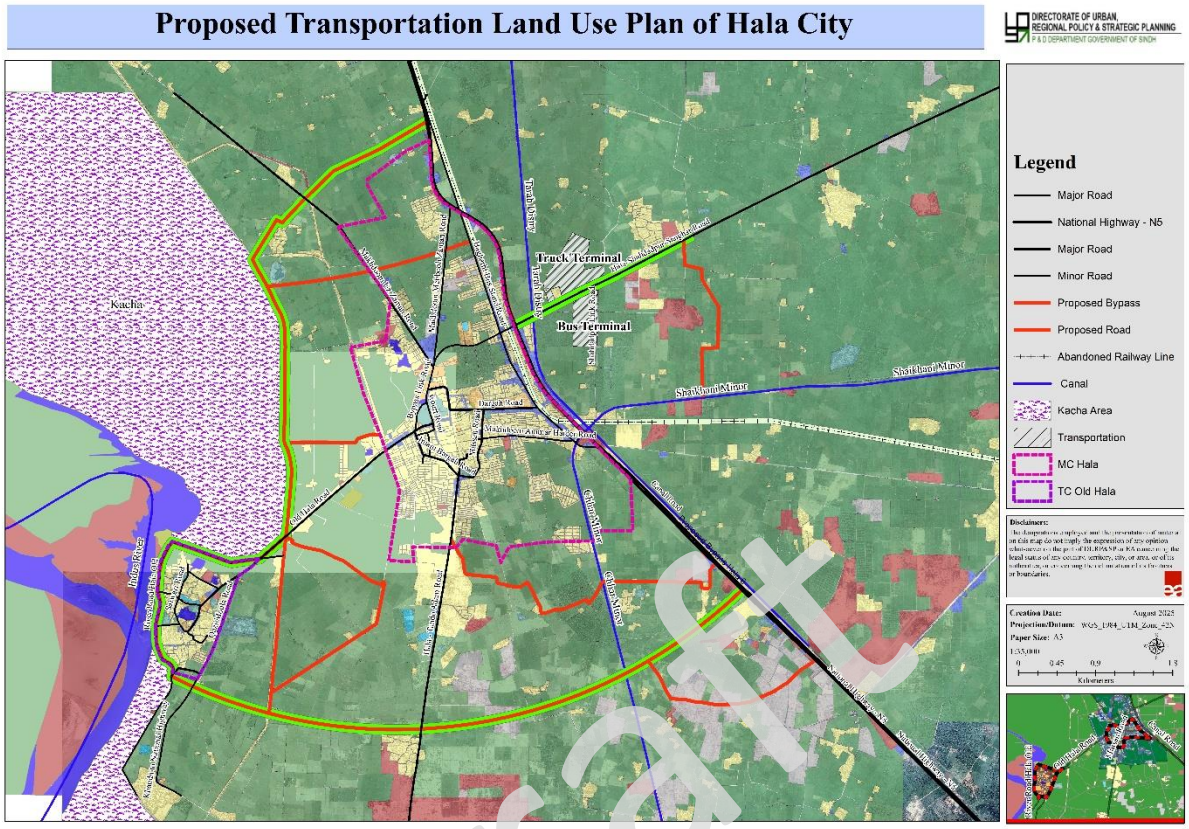
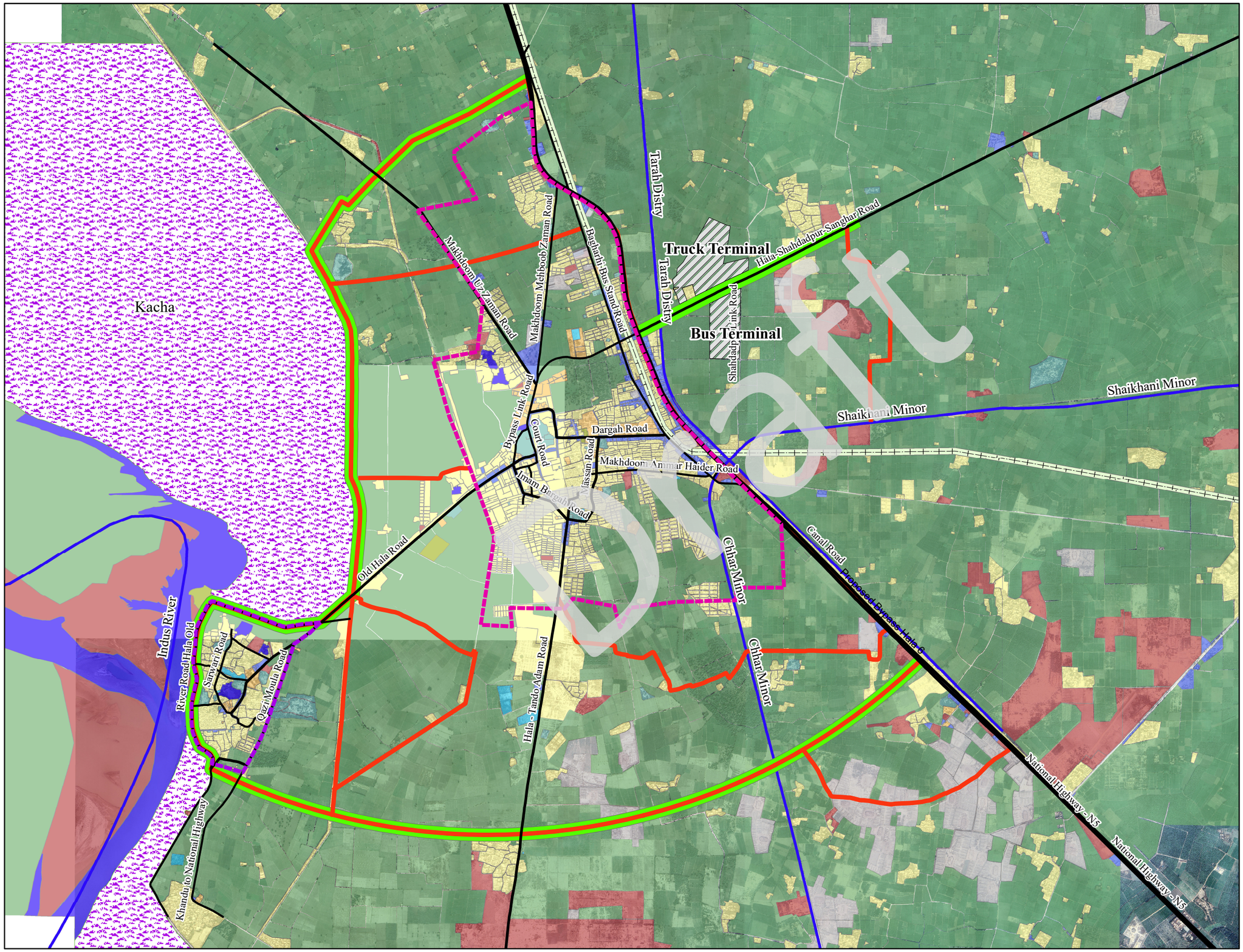


Figure 8-2: Proposed Transportation Land use for Hala City

Proposed Transportation Land Use Plan of Hala City

DIRECTORATE OF URBAN, REGIONAL POLICY & STRATEGIC PLANNING
P & D DEPARTMENT GOVERNMENT OF SINDH



Legend

- Major Road
- National Highway - N5
- Major Road
- Minor Road
- Proposed Bypass
- Proposed Road
- Abandoned Railway Line
- Canal
- Kacha Area
- Transportation
- MC Hala
- TC Old Hala

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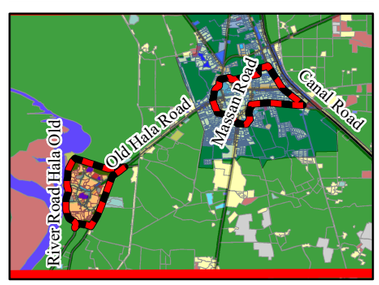
Kilometers



8.2 Energy

8.2.1 Existing Situation

Hala City's electricity supply is predominantly reliant on HESCO (Hyderabad Electric Supply Company), which provides power through urban feeders connected to one main grid station. The city benefits from relatively robust infrastructure, ensuring that 80% of residents have access to electricity, indicating a widespread distribution network. However, the city's electricity consumption is moderate, with 47% of residents using between 50-100 KWH per month, while 33% fall within the 101-200 KWH range. This distribution highlights a moderate level of electricity usage among residents. Despite this access, the city grapples with significant power challenges, primarily related to load shedding, as 59% of the population experiences extended power outages for 11-12 hours daily, severely impacting daily life and economic activities.

In response to these power disruptions, a substantial number of residents have adopted alternate power solutions, particularly solar energy. Approximately 30% of households report using alternative power sources, with solar energy emerging as the most popular, with respondents relying on it to meet their energy needs. The use of generators is also prevalent, though less common, with only 10% respondents indicating their use. Wind power remains largely unexplored, with minimal adoption. These trends reflect a growing shift towards sustainable and self-reliant energy solutions in Hala, spurred by the inconsistency of the main power supply. This situation highlights the need for improved infrastructure and sustainable energy.

8.2.2 Current Power Supply/Demand

The Power Supply to Hala city is through Hyderabad Electric Supply Company (HESCO) WAPDA via 132 KV Hala Grid station feeding district by 11 KV feeders. The power supply situation in Hala City, as serviced by the Hyderabad Electric Supply Company (HESCO) WAPDA through the 132 KV Hala Grid station, presents a scenario of current supply and future demand based on population growth:

Current Power Supply: As of 2025, Hala City has a population of 88,463. The power supply to meet the needs of this population is currently at 14.8 Megawatts (MW). This supply is facilitated via 11 KV feeders from the 132 KV Hala Grid station, a crucial infrastructure component ensuring electricity distribution across the district. By 2045 project demand would be reach to 26.56 MW. This projected demand, benchmarked against the World Bank's average minimum power requirement per capita, underscores a substantial increase in power needs.
According to the World Bank, for Pakistan Average Minimum Power Requirement per Capita in the year 2017 was 595 KWH, keeping the same standard the power requirement for Hala City is depicted in the following Table.

Year	Population	As per WB average Minimum Power Requirement Per Capita in year 2017 comes as 595 KWH
		Total Load MW
2025 (Current year) Hala City	**88,463**	**14.8 MW**
Projected Population 2045	158,052	26.56

Thus, between 2025 and 2045, Hala City's electricity demand is projected to increase from 14.8 MW to 26.56 MW, resulting in an additional requirement of approximately 11.76 MW to meet future needs, based on population growth. This growing demand cannot be addressed through incremental load adjustments alone and necessitates a comprehensive strengthening of the city's power supply and distribution systems. Meeting this future energy requirement will require not only capacity enhancement at the 132 KV Hala Grid Station but also:

- Upgradation and expansion of 11 KV feeders to reduce overloading and technical losses;
- Rehabilitation and augmentation of the existing distribution network, including transformers and low-voltage lines; and
- Improvement of service reliability and energy efficiency measures, including loss reduction, metering improvements, and integration of renewable energy options where feasible, to ensure a resilient and sustainable power supply for Hala City's long-term urban growth.

8.2.3 Issues and Problems:

- Shortage of electricity & power supply.
- Poor maintenance of electricity supply infrastructure.
- Power shortage due to non-payments of bills.
- Line losses and power theft.
- Outdated network in old town areas.
- Existing capacity of electricity supply is short to meet the growing demand of utility.
- No alternate source of electricity is available in the district.

8.2.4 SWOT Analysis of Hala Power Supply & Distribution Sector

Power Supply & Distribution			
Strength	**Weakness**	**Opportunity**	**Threats**
1. Hala City relies on a robust infrastructure provided by HESCO with a total of 457 transformers and capacity of 45,745 KVA, ensuring substantial coverage and distribution capabilities. 2. The city has a structured consumer complaint mechanism with multiple channels, enhancing customer service and feedback processes.	1. Lack of Long-Term Planning. 2. Regulatory Challenges 3. Reliance on conventional Power Sources. 4. Skills Shortage. 5. The city experiences regular load shedding, with 59% of residents reporting 11-12 hours of daily power cuts, indicating a significant reliability issue in the current power supply. 6. Aging infrastructure, including only one main grid station, struggles to keep up with current demands and future growth, necessitating urgent upgrades.	1. Capacity Expansion 2. Technological Advancements 3. Improvement in Distribution Efficiency. 4. By 2045, the projected population increase to 158,052 suggests a rising power demand, providing an opportunity for strategic expansion and infrastructure enhancement. 5. The integration of alternative energy sources such as solar, as preferred by 90 survey respondents, presents an opportunity to diversify and stabilize the city's energy portfolio.	1. Load shedding. 2. Non-Billing of customers and behavior capacity building issues. 3. Energy Security Risk. 4. An increasing population growth rate implies escalating electricity demand, with a future power requirement estimated at 7.6 MW by 2045, posing challenges to the existing supply capacity. 5. Inadequate streetlight coverage in less prominent areas raises safety concerns, requiring comprehensive planning and investment to ensure equitable infrastructure development across all city areas.

8.2.5 Strategic Development Plan

i. Long Term Plan

- The effective development of low-cost energy production systems can be used
- Success in achieving fuel efficiency, adopting new technologies and altering existing fuel-use

- Addition of sub stations as per requirement
- Encourage energy efficient building construction

ii. Short Term Plan

- HESCO has to improve its capacity of electricity generation, transmission and distribution system.
- By increasing the capacity of grid station will minimize electricity shortage & maximize production
- Opportunities available for alternative energy production through solar energy and wind power.
- Renewal of outdated network to meet existing and future demand.

8.3 Gas Supply

8.3.1 Existing Situation

In Hala Town, the contrast between the old and new town is striking. The New Hala Town, driven by a burgeoning population and small industrial activities, faces an increasing demand for natural gas that often surpasses the supply capacity. Residents and business owners here contend with intermittent gas supply, affecting daily life and economic activities. The situation worsens during peak consumption periods, exacerbating the issue's severity. This inconsistency not only disrupts the comfort of domestic users but also hampers the operational capabilities of local industries heavily reliant on gas for energy.

Old Hala Town, with its historical charm and a more leisurely pace of life, is not immune to gas supply woes. The aging infrastructure here, ill-equipped to handle modern demands, frequently leads to low pressure and supply outages. Challenges are further compounded by the town's layout and the condition of existing pipelines, which often require repair or replacement. While Old Hala Town's heritage is a source of pride, it sets the stage for the struggle to secure a reliable gas supply.

Throughout Hala Town, gas supply issues transcend mere inconvenience and become critical bottlenecks affecting public health, economic stability, and overall quality of life. Relying on alternative energy sources like majorly on wood and then on LPG cylinders places additional economic burdens on households and raises environmental concerns. The socio-economic survey conducted in our research showed that higher percentage of households face financial strain due to increased energy costs. Moreover, exploring alternative and renewable energy sources offers the promise of long-term sustainability, reducing Hala Town's dependency on conventional gas supply.

8.3.2 Strategic Development Plan

- Feasibility study for alternate resources available
- Measures to cater Load Shedding of both electricity and gas.
- Measure to appropriately priced the energy resources

8.4 Communication

8.4.1 Telephone, Mobile, Internet

Hala City is served by two PTCL (Pakistan Telecommunication Company Ltd) offices, located on Aisha hospital Road via Dargah Road. Despite the presence of these offices, a significant portion of the population does not rely on landline services, with approximately 84% of residents reporting the absence of PTCL or landline telephone connections. Instead, the overwhelming majority (89.10%) rely on cellular or mobile phones as their primary mode of communication. A small fraction of the population (1.40%) uses a combination of both cellular and PTCL landline services, while 7.20% report using both methods of communication. This heavy reliance on mobile phones mirrors broader trends across Pakistan, where mobile connectivity has largely overtaken traditional landline communication.

8.4.2 **Issues:**

- Lack of information sharing regarding agricultural activities, public health, veterinary, disaster forecasting etc.
- Most of the areas lack the coverage of PTCL.
- The internet usage is limited to educated families.
- Negative cultural and ethical exposure to young minds (youth), if not regulated properly.
- No check and balance of non-authorized/ non-biometric SIM's usage.

8.4.3 **SWOT analysis**

Information & Communication Technology			
STRENGTH	**WEAKNESSES**	**OPPORTUNITY**	**THREATS**
1. PTCL has established two offices which ensures better accessibility and coverage for the residents. 2. Diverse Communication options. 3. Potential growth and expansion.	1. Limited Internet/Wi-Fi Access. 2. Fake News 3. Lack of information sharing regarding agricultural activities, public health, veterinary, disaster forecasting etc.	1. Media can play important role in economic development and prosperity. 2. Immediate disaster forecasting through disaster emergency response center. 3. Increasing Demand for Internet Services.	1. Infrastructure Challenges.

9. ECONOMIC DEVELOPMENT PLAN

The economy of Hala is the primary driver of its growth and sustainability. Traditionally, the city has functioned as an agro-based hub, with cotton, wheat, sugarcane, and vegetables forming the backbone of its agricultural economy. Agro-processing units, rice and flour mills, cotton ginning factories, and trading markets contribute to employment generation and supply regional value chains. In addition, small industries, retail trade, transport, and services provide livelihood opportunities and support the city's role as a commercial center connecting Matiari District with Hyderabad, Tando Allahyar, and other urban markets.

Despite its economic potential, Hala faces several challenges. These include high youth unemployment, limited industrial diversification, weak infrastructure and logistics, low women's participation in the workforce, and climate-related risks that threaten agricultural productivity. At the same time, there is underutilization of local skills and limited access to finance for micro and small enterprises.

The Economic Development Plan (EDP) within this Strategic Development Plan (SDP) seeks to address these challenges while leveraging opportunities for inclusive and sustainable growth. It emphasizes:

- Modernizing agriculture and strengthening agro-based industries.
- Expanding trade, services, and ICT-based enterprises.
- Promoting industrial estates and small business clusters.
- Building human capital through vocational training and entrepreneurship programs.
- Encouraging women and youth participation in economic activities.
- Strengthening infrastructure, logistics, and market linkages.

I. Policy Direction

The EDP aims to create a more resilient, competitive, and inclusive economy by:

- Encouraging private sector investment under a transparent regulatory environment.
- Supporting farmers and producers to increase incomes through value addition and market access.
- Expanding employment opportunities with a focus on youth and women.
- Ensuring reliable infrastructure, energy, and ICT services to support business growth.
- Aligning economic strategies with SDGs, particularly Goals 2, 8, 9, and 11.

II. Link to Sectoral Strategies

This narration provides the overarching framework for economic development in Hala. The subsequent sub-sections of this section present **sector-wise strategies** for agriculture, industry, trade and commerce, services, ICT, and human resource development. These strategies are supported by targeted interventions, policy guidelines, and priority projects to operationalize the city's economic potential in line with the Master Plan's vision for 2045.

9.1 Agriculture

9.1.1 Existing Situation

Matiari contributes significantly in the agriculture sector of Sindh because its climate is suitable for production of various crops, including the Kharif crops of maize, rice, sugarcane, cotton and bajra and Rabi crops of wheat and barley. In addition to these, fruit orchards are abundant in this district. This district is famous, all-over Pakistan, for its Bananas and mangoes.
Irrigation methods in the district primarily involve canal and tubewell systems. Canal-irrigated areas saw some variations, peaking in 2019-20 but slightly dropping in 2020-21. This indicates the reliance on canal water for irrigation, which might be subject to annual changes in water availability or canal water distribution policies.

The total geographical area of district Matiari is 142,000 hectares out of this cultivated area is up to 87,819 hectares. Out of cultivable land dividing 2022-23, actually cultivated to 77,848 hectares leaving 9,971 hectares as fallow. Waste land available and not available for utilization land was 14,905 hectares.

Table 9-1: Land Utilization (Hectares) Matiari[41]

S. No	Type of Cultivated area	2017-18	2018-19	2019-20	2020-21	2022-23
1	Cultivated area	85,281	82,744	88,309	87,966	87,819
2	Current Fallow	9,967	9,968	9,969	9,970	9,971
3	Net area sown	75,314	72,776	78,340	77,996	77,848
4	Cultivated Waste	15,588	15,588	15,588	15,588	15,588
5	Not available for cultivated	17,443	19,982	14,415	14,758	14,905
***Source:** Sindh Statistics 2024*						

During the year 2022-23, the Production of Wheat was 188,230 M.Tons, Sugarcane 699,234 Bales, cotton 142,686 Bales, and Rapeseed & Mustard 1,579 M.Tons. Whereas, the crops, production field, and land utilization are given tables as under:

[41] Sindh Statistics 2024

Table 9-2: Comparison of Crop Production[42]

Sr. No	Crops	2018-19		2019-20		2020-21		2021-22		2022-23	
		Area	Production	Area	Production	Area	Production	Area	Production	Area	Production
1	Wheat (M.T)	40,686	164,227	41,577	187,980	42,588	202,125	41,649	175,760	47,596	188,230
2	Sugarcane (Bales)	12,560	830,551	11,906	741,407	12,454	861,702	13,110	984,842	12,389	699,234
3	Cotton (Bales)	32,529	56,948	41,786	208,675	35,792	121,262	38,718	234,226	39,496	142,686
4	Rapeseed & Mustard (M.T)	718	725	867	876	1,388	1,402	1,492	1,467	1,552	1,579

The irrigation system of this district is dependent on two major sources i.e, Rohri Canal and Indus River. Rohri canal irrigates the eastern lands of this district and the Indus River irrigates the western parts of the district.

9.1.2 SWOT Analysis

Agriculture			
Strength	**Weakness**	**Opportunity**	**Threats**
1. Agriculture based economy 2. Strong network of distribution of agro based products 3. Suitable climate for production of various crops.	1. Shortage of technical and home-based industry 2. Low demand of home-grown food products 3. Less revenue generation by local government 4. Water logging and salinity 5. Lack of agriculture credit facilities	1. Job opportunity for rural population 2. Healthy population 3. Strong transport system 4. Outside investors show interest in agriculture sector 5. Export quality Agriculture products can be produced	1. Less efficient local markets 2. Shortage of agro based products 3. High land prices

[42] Sindh Statistics 2024

9.1.3 Issues

- The sugarcane prices are unstable in Matiari and the industrialists never miss an opportunity to deny farmers their due share. During the crop season, the net take home decreases drastically when the crop is bumper and the industry is not scared of the supply.
- High price of Inputs (Fertilizers Material, Pesticides and Quality seed)
- Water logging and salinity.
- Lack of Tube well installation facilities and Shortage of irrigation water.
- Irrigation and Drainage problem
- Shortage of food godowns and warehouses.
- Insufficiency of covered storage.

9.1.4 Strategic Development Plan

i. Long Term

- Agricultural technology development, dissemination and adoption.
- To address the property issue / raising of income level, waste land available should be granted to land less
- Enhancing crop productivity through adoption of new technologies
- Provision of agricultural infrastructure for the welfare and prosperity of local population.

ii. Short Term

- Modernize and revitalize agriculture.
- Use of modern techniques for cultivation by choosing healthy seeds and fertilizers for increasing yield per acre.
- Increase the supply and quality of agricultural crops
- Enhancement of the storage capacity.
- Provision of warehouses, food gowdowns for storage of agricultural products.
- Construction of covered gowdown.

9.1.5 Economic Development

In order to improve the crop production improvement and intervention from government departments are needed in the following areas:

- Agriculture credit facilities
- Regular supply of irrigation water
- Availability of fertilizer, pesticides and quality seed that results in improvement in crop yield/acre that in turn increase the crop production for internal consumption & exports
- Installation of tube wells
- Measures to reduce water logging and salinity
- Construction of farm to market roads

9.2 Livestock

9.2.1 Existing Situation

Matiari contributes significantly to the livestock landscape of Sindh, with strong representation across several key categories. The district accounts for 3.9% of Sindh's total cattle population, underscoring the central role of cattle farming in its agricultural economy. With a 3.2% share in the province's buffalo population, Matiari also plays a vital role in the dairy sector, given the high milk yield associated with buffaloes. In the realm of small ruminants, the district contributes 2.6% to Sindh's goat population and 1.3% to the sheep population, reflecting the prevalence of small-scale livestock farming practices. Matiari also maintains a presence in poultry farming, representing 1.5% of Sindh's total poultry population, highlighting its role in supporting local food security through meat and egg production. Other livestock categories, including camels, horses, mules, and asses, range from 0.3% to 2.0% of the provincial totals, indicating their limited but functional role in transportation and labor. Overall, Matiari's livestock sector demonstrates a balanced mix of large and small animals, supporting both subsistence and commercial agriculture in the district.

Table 9-3: Number of Livestock[43]

Livestock	Sindh	Matiari	%Share
Cattle	6,925,022	266,906	3.90
Buffaloes	7,340,162	234,680	3.20
Sheep	3,958,508	51,865	1.30
Goats	12,572,221	330,003	2.60
Camels	278,424	876	0.30
Horses	44,999	690	1.50
Mules	19,512	69	0.30
Asses	1,004,925	20,328	2.00
Poultry	14,135,540	213,809	1.50

9.2.2 Impact of Flood 2022 on Livestock

The 2022 floods had a devastating impact on livestock in Hala Town and the broader Matiari District, severely affecting the agricultural backbone of the region. Thousands of animals were lost or displaced due to the inundation, leading to significant economic losses for farmers and herders who rely on livestock for their livelihood. The floodwaters not only drowned animals but also destroyed grazing fields, contaminated water sources, and disrupted supply chains for feed and veterinary services. This crisis not only threatened the immediate survival of livestock but also posed long-term challenges for recovery and rebuilding of the livestock population in the area, impacting food security and economic stability in Hala Town and its

[43] Sindh District Profile 2021

surroundings. Number of livestock were displaced due to flood, according to the report of PDMA Rehabilitation Department of GoS "Flood 2022 in Sindh" 6788 livestock were died in District Matiari.

9.2.3 Issues

- Matiari District contributes significantly to Sindh's livestock population, particularly in cattle, buffaloes, sheep, goats, and poultry. This large livestock population underlines the district's crucial role in dairy and meat production. However, managing such a large number of animals requires robust veterinary services, proper nutrition, and disease management, which can be challenging.
- The absence of veterinary hospitals and only two veterinary dispensaries indicate a gap in comprehensive animal healthcare services. While 21 veterinary centers are present, the absence of full-fledged hospitals might limit access to advanced medical treatments and surgeries, which are critical for disease management and animal welfare.
- The increasing numbers of livestock, particularly cattle, buffalo, sheep, and goats being slaughtered, reflect a growing meat industry. However, this also raises concerns about sustainable livestock management, humane slaughtering practices, and proper meat handling to ensure food safety and animal welfare.
- The high number of vaccinated and treated animals suggests proactive measures in disease prevention. However, the vast scale of vaccinations and treatments needed for such a large livestock population can be logistical and resource-intensive challenge.
- The absence of veterinary hospitals in the district could hinder the provision of comprehensive and specialized care for livestock, particularly for more complex health issues that require advanced medical attention.
- The limited number of veterinary dispensaries could lead to disparities in animal healthcare, especially in remote or underserved areas of the district. This might result in uneven access to veterinary services, impacting livestock health and productivity.
- With a large livestock population, ensuring adequate resource allocation for animal healthcare, including vaccinations, treatments, and castrations, is critical. This requires efficient planning and management to meet the diverse needs of different livestock species.
- The high rate of animal slaughter, coupled with limited veterinary infrastructure, poses risks to food safety and public health. Ensuring that livestock are healthy and slaughtered humanely and hygienically is vital prevent the spread of zoonotic diseases and ensure the quality of meat products.

9.2.4 Need Assessment

The veterinary services in Matiari District reflect a mix of strengths and gaps in animal healthcare infrastructure. While the district has no veterinary hospitals, it does have 28 veterinary centers and two veterinary dispensaries, which provide essential services such as vaccinations, routine check-ups, and basic treatments. In the year 2022-23, a total of 22,945,798 animals were vaccinated, 2,153,807 animals received medical treatment, and 99,204 were castrated. These figures indicate a robust outreach in terms of preventive and primary healthcare for livestock. However, the absence of veterinary hospitals and the limited number of dispensaries suggest a need for more comprehensive and accessible services. Establishing at least one full-scale veterinary hospital and expanding dispensary coverage would significantly enhance animal health management and support the region's livestock-dependent economy.

9.2.5 Strategic Development Plan

- Improving the production performance of livestock in District through manipulation of different minerals and feed supplements.
- Enhancement of Livestock Production and Productivity through strategic deworming and vaccination.
- Establishment of model livestock farms linked with improved supply chain and value addition.
- Establishing new cattle & dairy farms that lead to increase in number of cattle and quantity of milk.
- Enhancing Veterinary Services.

ADP project already initiated by Sindh Government to overcome the rural Sindh Livestock.

9.3 Fisheries

9.3.1 Existing Situation

The fisheries data for Matiari District in the years 2020 and 2023 presents a picture of change and transition in the local fishing industry. This change is reflected in the variation in the number of boats and fishermen over the two years, with the number of boats decreasing from 83 in 2020 to 24 in 2023, while the number of fishermen increased significantly from 167 to 572. This shift suggests a transformation in the fishing structure of the district, indicating changes in fishing practices, ownership patterns, or increased labor engagement despite a reduced fleet size. It may also imply consolidation of fishing operations or a move towards more labor-intensive fishing or aquaculture activities.

In terms of fish production, there is a sharp decline from 5,894 metric tons in 2020 to 30 metric tons in 2023. This substantial reduction indicates serious challenges faced by the fisheries sector, which may be attributed to environmental degradation, depletion of fish stocks, reduced access to water bodies, climate-related impacts, or limitations in fishing infrastructure and resources.

The fishing industry in Matiari remains significant for the local economy and food security, particularly given the sharp increase in the number of fishermen dependent on this sector for their livelihoods. However, the imbalance between manpower and production highlights growing vulnerability within the sector and underscores the need for targeted interventions to support fishermen and stabilize production levels.

This scenario also points to the urgent need for strategic reforms in the fishing sector. There is considerable potential to restore and enhance production through improved management of water bodies, introduction of sustainable aquaculture practices, modernization of fishing techniques, and development of value-added fish products. Such growth, however, must be carefully planned and regulated to ensure the long-term sustainability of fish resources and the livelihoods that depend on them.

Table 9-4: Matiari District; Annual Fish Production Fisheries-Water bodies, fish farms & production (M.Tons)[44]

Year		2020	2023
1	Number of Boats	83	24
2	Number of Fishermen	167	572
3	Annual Fish Production (M.Ton)	5,894	30

[44] Sindh Statistics 2024

9.3.2 SWOT Analysis

Livestock & Fisheries			
Strengths	**Weakness**	**Opportunity**	**Threats**
1. Livestock sector supports over eight million rural families in Sindh, providing 35-40% of their income.[45] 2. Sindh contributes 27% to Pakistan's overall livestock production with 45 million cattle.[46] 3. Matiari's significant livestock numbers include 266,906 cattle and 234,680 buffaloes, major contributors to dairy and meat production.[47] 4. Fasheries maintained stable operation with 83 boats and 167 fishermen, producing 5,898 metric tons of fish in 2021.[48]	1. Limited veterinary services with no hospitals and only two dispensaries in Matiari, impacting animal health care. 2. Over-reliance on traditional slaughter methods with increasing numbers: cattle slaughtered rose from 6,632 in 2016 to 6,831 in 2017.[49] 3. Static growth in the fisheries sector with no increase in boats or fishermen in two years	1. Potential to modernize livestock management and slaughter practices to enhance productivity and meet increasing meat demands. 2. Opportunities to expand veterinary services and infrastructure to better support livestock health and productivity. 3. Possibility to increase fish production through modern fishing techniques and sustainable aquaculture practices.	1. Vulnerability of livestock to health issues and market fluctuations, with significant losses during emergencies like floods. 2. Environmental challenges and climate change impacting both livestock and fish populations, with 6,788 livestock lost in the 2022 floods 3. Overfishing and environmental degradation posing risks to the sustainability of fisheries.

9.3.3 Need Assessment

There is a clear need to develop and implement a broad-based fisheries policy to support the accelerated and sustainable development of the fisheries sector in Matiari District. In view of declining fish production and increasing dependence of livelihoods on fisheries, the Government of Sindh must take targeted measures to modernize the sector, including the establishment of district-level fish farms to promote aquaculture, enhance productivity, and reduce pressure on natural water bodies. Such interventions are essential to improve fish yields, ensure food security, and strengthen income opportunities for the growing number of fishermen in the district.

[45] Livestock (livestocksindh.gov.pk)
[46] Sindh has 27% share in Pak livestock sector: official (tribune.com.pk)
[47] Sindh District Profile 2021
[48] Sindh Statistics 2022
[49] Development statistics 2022

9.3.4 Issues

- The decrease in the number of boats from 83 to 24, despite an increase in fishermen from 167 to 572, indicates limited availability of fishing assets and infrastructure, which may be constraining productivity and efficiency in the fisheries sector.
- The sharp decline in fish production from 5,894 metric tons in 2020 to 30 metric tons in 2023 indicates reduced output from the fisheries sector, suggesting possible constraints related to resource availability, environmental conditions, or limitations in existing fishing and aquaculture practices.
- The mismatch between the number of fishermen and available boats, along with low fish production levels, suggests that existing resources may not be optimally utilized, highlighting the need for improved fishing practices, equipment support, and capacity building for fishermen.
- The data suggests a careful approach to fish harvesting, which is good for sustainability. However, there may be concern about overfishing, stock depletion, or environmental degradation that aren't immediately apparent from the numbers alone. Sustainable fishing practices are essential to ensure the long-term viability of fisheries.
- The fishing sector's importance to the local economy and food security means that any disruptions could have significant impacts. The industry might be vulnerable to external factors such as climate change, pollution, or changes in market dynamics.
- The slight increase in production could indicate a need for modernizing fishing methods and exploring sustainable aquaculture practices. Introducing new technologies and practices could help increase production while maintaining ecological balance.
- There's potential for growth through value-added fish products, which could boost revenue. However, the current data doesn't provide insights into market access, supply chain efficiency, or the presence of value-added processing facilities in the district.
- The fishing industry in Matiari may benefit from targeted policy interventions and investment to address its challenges. This includes funding for infrastructure development, training programs, and initiatives to promote sustainable fishing practices.

9.3.5 Strategic Development Plan

- Need for extension services in private sector
- Lease of fishing rights, conservation, management and promotion of fisheries
- Local publicity and awareness
- Training through open training schools
- Enforcement of fisheries enactment in their respective domain
- Fish seed stock replenishment in natural water bodies in their respective domain

- Aquaculture development activities through modern techniques
- Collection of statistical data of fish and fish resources in their respective domain

9.3.6 Economic Development

i. Establishment of new Cattle and Fish farms

It is expected that sustainable growth of livestock will be maintained as per objectives of Livestock & Fisheries Department with the participation of private sector. Hence there is possibility for increasing number of livestock and dairy farms to meet the requirement of meat and milk. Similarly new fish farms and poultry farms in the districts need to be established to generate production and income of the people engaged in this business. For this there is proposed the Cattle Farm along the Shaikhani Minor in the west of Hala City, while Fish farms need to be identified by concerned authority to attract the private investment, where water is available.

There is need to develop and implement a broad-based fisheries policy which is required for accelerated development of the fisheries sector. Government of Sindh has to take measures to modernize the fisheries sector including establishment of farms on district level to promote fish farming.

9.4 Industries

9.4.1 Existing Situation

As Matiari is very near to Hyderabad (only 25 km), so the people of Matiari do accomplish their industrial needs from there. But the old industrial products of Matiari are very much popular all over Pakistan and abroad. These industrial products are "KHADEE", "KASHEE" and "JUNDI" of Hala, and "AJRAK" of "MATIARI" City. New addition in industries of Matiari is Matiari Sugar Mills, which is situated in the east of Matiari city at the distance of near about 6 km.

Most of the industries in Matiari are pertaining to the agriculture. Famous among these are the sugar and flour mills since wheat and sugarcane is cultivated on large scale in the district. Cottage industries are also prevalent in the district as khaddar and ajrak cloth of this district are famous. Besides, handmade potteries of Hala town are well known. The Government has established a small industrial estate (SME) on the Hala-Shahdadpur Road. Hala Town's small industrial estate spans a generous area of 51 acres, offering ample space for industrialists and entrepreneurs to drive the industrialization of the region. Strategically located between Hala-Shahdadpur Road and near the TCF Tapal Campus, this estate is poised to become a significant industrial hub.

Table 9-5: Site area in Hala City[50]

Year of establishment	Total area in acres	Undeveloped area	No. of plots developed	No. of plots allotted	No. of plots utilized
1996-97	51-13	12-0	104	60	11

- **Types of Industries**

The following exploration and production companies are working in district Matiari:

1. Matiari Sugar Mill
2. Pakistan Petroleum Ltd (PPL)
3. Banglani Cotton Factory
4. Dastagir Cotton Factory
5. Kohistan Cotton & Oil mill
6. Makhdoom Shahnawaz Cotton Factory
7. New Model Shinwari
8. New Saeed Abad Cotton Factory
9. Qalandri Cotton Ginning Factory
10. Rahman Cotton Factory

Name	Activities
Mattiari Sugar Mill, Matiari	Sugar
Banglani Cotton Factory	Textile, Wearing Apparel & Leather Products
Dastagir Cotton Factory	Textile, Wearing Apparel & Leather Products
Kohistan Cotton & Oil mill	Textile, Wearing Apparel & Leather Products
Makhdoom Shahnawaz Cotton Factory	Textile, Wearing Apparel & Leather Products
New Model Shinwari	Textile, Wearing Apparel & Leather Products
New Saeed Abad Cotton Factory	Textile, Wearing Apparel & Leather Products
Qalandri Cotton Ginnging Factory	Textile, Wearing Apparel & Leather Products
Rahman Cotton Factory	Textile, Wearing Apparel & Leather Products

[50] Estates – Sindh Small Industries Corporation (ssic.gos.pk)

Industrial Estate

The government has established a Small Industrial Estate over 10 acres at the Hala-Shahdadpur Road to encourage cottage industry in the area. The object is to establish planned industrial areas where industrialists could have all the facilities such as land, road, railway, water supply, electricity, gas, telephone, godowns, sanitation, drainage, labour colonies and other necessary public amenities.

9.4.2 SWOT Analysis

Industries			
Strengths	**Weakness**	**Opportunities**	**Threats**
1. Diverse Industrial Base with various industries (sugar mills, cotton factories, etc.) 2. Agricultural Backbone supports agro-based industries 3. Strategic location near major markets 4. Renowned handicrafts contribute to cultural tourism 5. Existing Infrastructure like the Small Industrial Estate supports industrial operations.	1. Infrastructure Gaps requiring improvements, especially in commercial areas 2. Limited Export Capabilities restrict economic benefits from local crafts 3. Heavy Reliance on Traditional Methods limits market expansion 4. Insufficient Power Supply may impact future industrial productivity and expansion	1. Infrastructure Development can attract more business and facilitate growth 2. Market Expansion for local and international markets 3. Innovation and diversification to open new markets and increase competitiveness 4. Adoption of Sustainable Practices to meet consumer demands for sustainability.	1. Economic Instability could impact local industries 2. Environmental Challenges like climate change affect agricultural productivity 3. Competition from other regions or international markets 4. Regulatory changes could affect export-oriented industries

- **Occupations**

The main occupations of the people of Hala are agriculture, trade, skilled & unskilled labour, and professionals specially working in the field of oil exploration companies. Continuous training of professionals and skilled workers increase the possibilities of more job opportunities. Occupational data and monthly income pattern of Hala MC according to Socio Economic Survey conducted by the Consultants are summarized as under:

Table 9-6 Occupation of Respondents[51]

S. No.	Occupation	Nos. Respondent	%
1	Banker	5	0.80
2	Doctor	4	0.60
3	Engineer	4	0.60
4	Labor	464	70.00
5	Other	146	22.00
6	Teacher	40	6.00
	Total	663	100.0

9.4.3 Need Assessment

- Vocational training to Women force should be encouraged
- Establishment of cottage industries
- Establishment of Small industrial zone

9.4.4 Strategic Development Plan

i. Long Term Plan

- Sufficient market infrastructure to ensure optimal value addition
- Development of Industrial Estates / Apparel Park / Special Economic Zone in District
- Heritage saving through empowerment of artisans for development of handicrafts
- Paradigm shift from industrial agriculture to diversified agro ecological Systems
- Provision of infrastructure for establishment of new industries.

ii. Short Term Plan

- Support industrial development.
- Modernize and revitalize the service sector.
- Enhancement of colonization in SIEs through provision of missing facilities
- Provision of vocational training and employable skills to the unemployed youth of the district
- Customized lending and micro financing to small industries

[51] Socio-economic survey conducted by consultant 2023

9.4.5 Economic Development Plan

On the basis of projected increase in crop production up to 2045 and present industrial base, there is potential for enhancing the capacity utilization of present units and establishing new industrial units with following limitations:

- Addition in industrial units suggested may vary as it is dependent upon the production capacity of each unit. As noted earlier, establishment of a Small Industrial Estate is already in process which should be completed with required facilities
- The area of industrial estate may need extension with necessary facilities for encouraging the investors to establish new units
- Training should be provided to local workers in relvant industies and women working force to establish cottage industry.
- Incentives to private investors for establishment of new industrial units and enhance the production capacity of present industry. Sindh Investment Board and Sindh Small Industries Corporation have vital role to play.

The increase in industrial growth will obviously contribute towards better economy of the city with increase in per capita income, reduction in unemplyment rate and poverty allleviation.

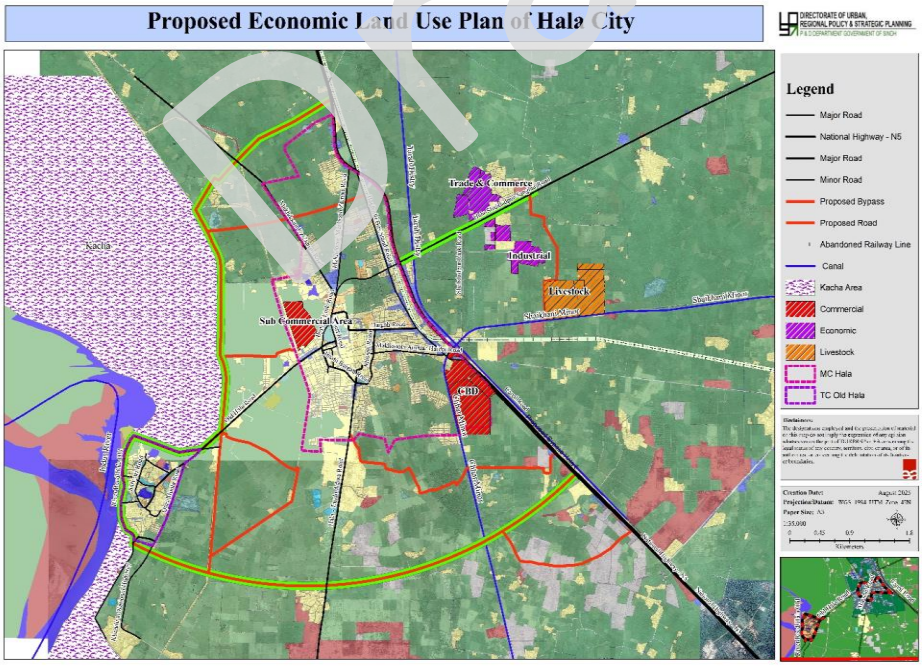
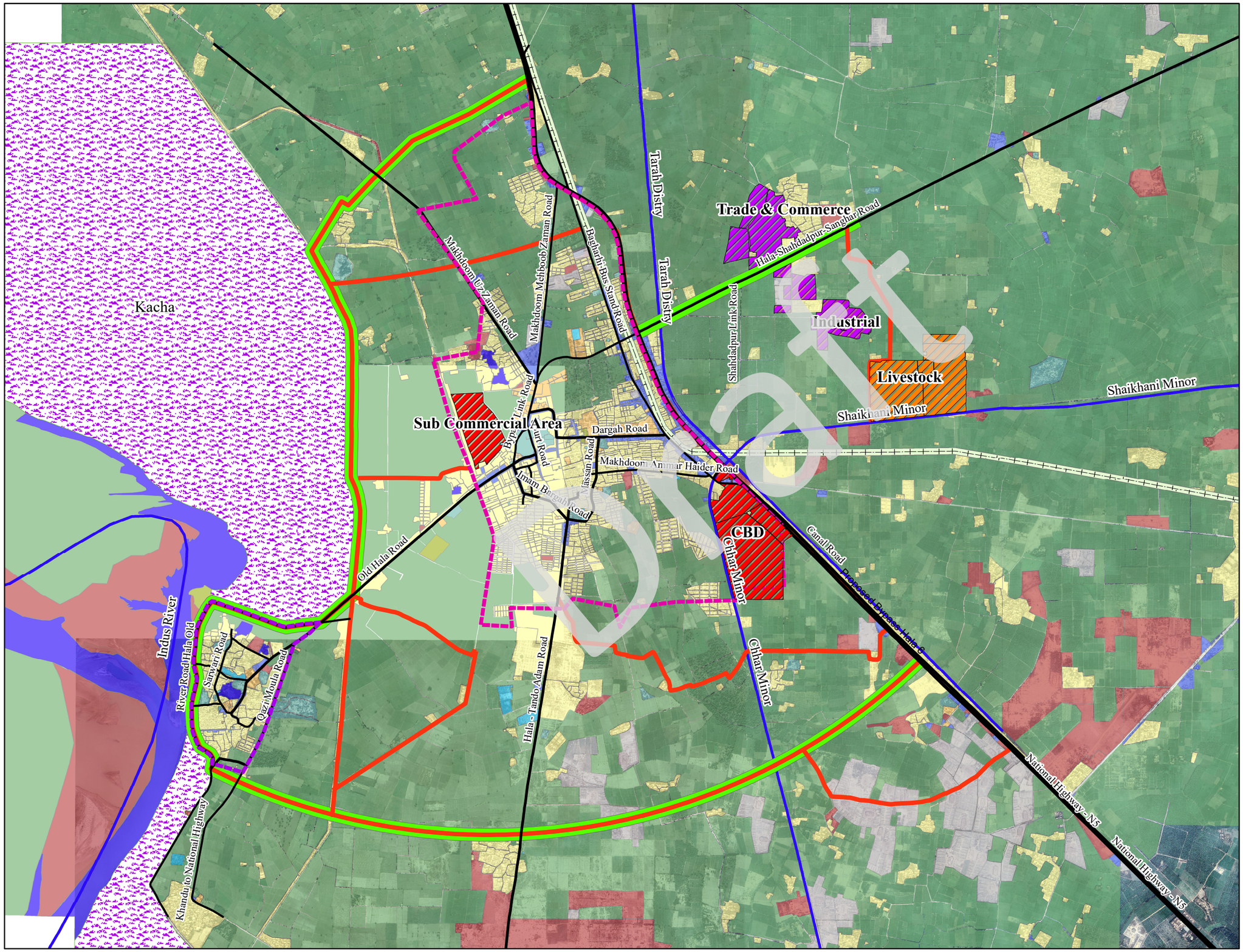


Figure 9-1: Proposed Economic Land use for Hala

Proposed Economic Land Use Plan of Hala City

DIRECTORATE OF URBAN, REGIONAL POLICY & STRATEGIC PLANNING
P & D DEPARTMENT GOVERNMENT OF SINDH



Legend

- Major Road
- National Highway - N5
- Major Road
- Minor Road
- Proposed Bypass
- Proposed Road
- Abandoned Railway Line
- Canal
- Kacha Area
- Commercial
- Economic
- Livestock
- MC Hala
- TC Old Hala

Disclaimers:
The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of DURP&SP or EA concerning the legal status of any country, territory, city, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Creation Date: August 2025
Projection/Datum: WGS_1984_UTM_Zone_42N
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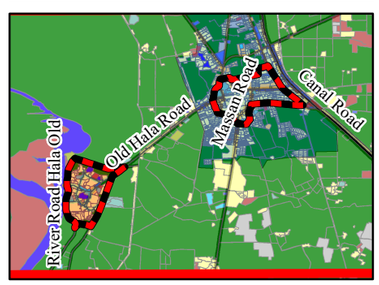
Kilometers



9.5 Trade and Commerce

Hala Town, an integral part of Sindh province, Pakistan, stands as a vibrant testament to the interplay of history, culture, and commerce. The town's trade and commerce scene is as dynamic as its history, deeply rooted in tradition yet evolving with the times.

Dargha Road, more than just a pathway, is the lifeline of Hala. It's a bustling conduit that caters to the daily essentials and acts as a critical link connecting different aspects of the town's social and economic life. The road is lined with shops offering fresh produce, textiles, and household items, making it a central hub for daily shopping. Banks and markets along Dargha Road not only facilitate financial transactions but aslo contribute to the town's commercial vibrancy. The presence of Shahi Bazar on this road, despite its need for infrastructural improvements, further cements its status as a commercial hotspot. This bazaar, functioning as a wholesale market, is home to an array of shops, banks, government offices, and educational and healthcare institutions.

To further propel Hala's trade and commerce, there's a need for infrastructural enhancements, particularly in the old commercial districts. Improving facilities, access, and amenities could significantly elevate the shopping experience, attracting more costumers and investors. Additionally, supporting local artists and through marketing initiatives and export facilitation could bring Hala's unique crafts to the global stage, opening up new markets and revenue streams.

In essence, Hala Town stands as a beacon of economic potential and cultural richness. Its trade and commerce sector, steeped in tradition yet ripe for growth, offers a unique opportunity to blend cultural heritage with economic development, ensuring a prosperous future for its residents.

9.5.1 SWOT analysis

Trade & Commerce			
Strengths	**Weakness**	**Opportunities**	**Threats**
1. Established Commercial Hubs. 2. Dargah Road serves as a central hub for trade, lined with diverse shops and financial institutions 3. Shahi Bazar functions as a bustling wholesale market, boosting local commerce. 4. Strong tradition of artisanal craftsmanship, particularly in woodwork, pottery, and textiles.	1. The failure of PPP trouble for locals and government. 2. Demise of local agriculture market. 3. Un-planned local business activities.	1. Promoting home-grown handicrafts. 2. More opportunities for public private partnership. 3. The significant presence of business interest groups in the town presents an opportunity to collaborate and promote local businesses 4. Support to local economy 5. Employment opportunities. 6. Adopting holistic economy model.	1. Security concerns 2. Inflation 3. PPP (Public Private Partnership) setbacks. 4. Insufficient Subsidies from local and provincial Government.

9.5.2 Issues

- Shahi Bazar, a key commercial area, requires infrastructural improvements. Issues like inadequate maintenance, poor sanitation, and lack of modern facilities can deter costumers and affect business.
- The inadequacy of streetlights, particularly in smaller, less prominent areas, poses safety and accessibility challenges. This can affect the trade activities during evening hours and impact the overall business environment.
- With the current power supply not meeting the future demand as projected, there may be issues of power shortages and reliability, affecting both industries and commerce.
- While Hala is known for its handicrafts, there may be challenges in marketing these products effectively and tapping into export markets, this limits the potential economic benefits that could be derived from these unique products.

- The heavy reliance on traditional commerce methods and a lack of diversification in the types of goods and services offered can limit the town's commercial growth and appeal to a broader market.

9.5.3 Strategic Development Plan

I. Long Term Plan

- Develop a modern wholesale fruit & vegetable market with cold storage, truck terminals, and logistics facilities at the city periphery.
- Formalize trade clusters (agricultural produce, handicrafts, textiles) with designated spaces, stalls, and organized facilities.
- Establish e-commerce and digital platforms for local artisans, shopkeepers, and agricultural producers to expand regional/national reach.
- Promote Public-Private Partnerships (PPP) for commercial infrastructure, including retail hubs, logistics, and storage.
- Create pedestrian-friendly commercial corridors with organized vending, parking, and utilities.

II. Short Term Plan

- Upgrade existing bazaars (Old National Highway, Shahi Bazar) with façade improvements, signage, footpaths, and waste management.
- Relocate hawkers to designated vending zones to reduce congestion while preserving livelihoods.
- Provide microfinance and small grants for artisans and shopkeepers to strengthen local trade.
- Develop storage and small cold chain facilities for fruits and vegetables to minimize post-harvest losses.
- Introduce marketing campaigns to promote Hala's handicrafts, retail products, and agri-trade at provincial level.
- Improve lighting, drainage, and security in core trade zones.

9.5.4 Priority Projects

i. Establishment of Fruit and Vegetable Market at Hala City

The establishment of a dedicated fruit and vegetable market in Hala City is essential for promoting public health, supporting local agriculture, and enhancing food accessibility. By providing a centralized location for fresh produce, this market will facilitate direct transactions between farmers and consumers, thereby reducing intermediaries and lowering costs for residents. In addition to a well-organized market space, the inclusion of storage facilities, such as a godown for bulk storage and frozen storage options, will ensure the preservation of quality produce and extend shelf life. This infrastructure will also create a vibrant community space that fosters social interaction and cultural exchange, while offering opportunities for local vendors and entrepreneurs. Moreover, enhancing the availability of fresh fruits and vegetables will contribute to healthier dietary choices among residents, ultimately leading to improved public health outcomes, a more sustainable urban environment, and increased revenue generation for the city. This project is aligned with SDGS, particularly with Goal 2 (Zero Hunger) and Goal 11 (Sustainable Cities and Communities).

- **Scope**

- **Planning and Site Selection**
  - Identification and selection of a suitable site within or near Hala City with good accessibility for farmer, vendors, and consumers
  - Assessment of land availability, connectivity, utility access, and future expansion potential
- **Market Infrastructure Development**
  - Planning and construction of a dedicated and organized fruit and vegetable market with covered vending areas
  - Provision of designated stalls for fruit and vegetable vendors to ensure orderly market operations
  - Development of internal circulation paths for pedestrians and goods movement
- **Storage and Handling Facilities**
  - Construction of bulk storage godowns for temporary storage of agricultural produce
  - Provision of cold and frozen storage facilities to preserve perishable items and extend shelf life
  - Installation of proper loading and unloading areas to support efficient logistics
- **Supporting Facilities and Services**
  - Provision of basic amenities including drinking water, toilets, waste collection points, and sanitation facilities
  - Development of small-scale commercial facilities such as weighing stations and packaging areas
  - Provision of administrative and management space for market operations
- **Environmental and Public Health Measures**
  - Implementation of proper solid waste management systems to handle organic and market waste
  - Provision of drainage systems to prevent waterlogging and maintain hygienic conditions
  - Promotion of food safety and hygiene standards within the market

- **Size**
  - Development of a dedicated fruit and vegetable market within or near Hala City, covering an estimated 4-6 acres of land to cater to urban and peri-urban demand.
  - Construction of covered market sheds with approximately 150-200 designated stalls for fruit and vegetable vendors to ensure organized and hygienic market operations.
  - Establishment of bulk storage godowns for temporary storage of agricultural produce, along with cold and frozen storage facilities to handle perishable items and reduced post-harvest losses.
  - Provision of internal circulation roads and pedestrian pathways to support smooth movement of goods, vendors, and consumers within the market.
  - Development of loading and unloading bay to facilities efficient logistics for farmers, wholesalers, and transport vehicles.
  - Installation of supporting infrastructure including drinking water supply, sanitation facilities, waste collection points, weighing stations, packaging areas, and administrative offices.
  - Implementation of drainage and solid waste management systems to maintain hygienic conditions and minimize environmental impacts.
  - The project will serve Hala City and surrounding rural areas, improving access to fresh produce, enhancing public health, and supporting local farmers and vendors through a centralized market facility.

- **SDG's Alignment**

I. **Goal No.2: Zero Hunger**
The project also contributes to SDG 2.3 under zero hunger by enhancing market access for farmers, reducing post-harvest losses, and improving the availability of fresh produce in the city.

II. **Goal No.8: Decent Work and Economic Growth**
Relocation and operation of the fruit and vegetable market will create jobs in agriculture, retail, logistics and market management, contributing to SDG 8.3 and 8.5, which aim to support productive employment and inclusive economic growth.

III. **Goal No.11: Make Cities and Human Settlements Inclusive, Safe, Resilient and Sustainable**
By reducing congestion in the city center and promoting organized urban development, the project supports SDG 11.2 and 11.3, which focus on improving urban mobility and ensuring inclusive, sustainable city planning.

- **Implementing Authority**

Government of Sindh, Local Government, MC New Hala

- Preliminary Cost Estimate

Estimated Cost: Rs.950 million approx.

- **PROVISION FOR STREET HAWKERS**

The provision for street hawkers in Hala City is vital for fostering economic growth and enhancing urban vibrancy. By formally integrating street hawkers into the city's regulatory framework, this initiative will support local entrepreneurship, create job opportunities, and provide affordable goods and services to residents. Designating separate areas for hawkers will help alleviate traffic congestion while promoting social inclusion by empowering marginalized groups who rely on street vending as a primary source of income. Moreover, these designated spaces will enhance the overall urban landscape, improve public safety, and contribute to a dynamic, culturally rich environment that attracts both residents and visitors. This project aligns with several Sustainable Development Goals (SDGs), particularly Goal 8 (Decent Work and Economic Growth) and Goal 11 (Sustainable Cities and Communities).

- **Scope**

- **Planning and Identification of Hawking Zones**
    - Identification and demarcation of suitable locations for street hawkers in commercial areas, near markets, transport nodes, and other high-footfall zones within Hala City
    - Assessment of accessibility, pedestrian flow, traffic impact, and compatibility with surrounding land uses
    - Allocation of designated zones to minimize congestion and avoid encroachment on roads and sidewalks

- **Design and Infrastructure Development**
    - Planning and development of organized hawking zones with clearly marked vending spaces
    - Provision of standardized kiosks, carts, or stalls to ensure uniformity and improved urban aesthetics
    - Development of pedestrian-friendly layouts with adequate circulation space

- **Basic Utilities and Services**
    - Provision of basic amenities including drinking water points, waste bins, and sanitation facilities near hawking zones
    - Installation of lighting to enhance safety and extend operational hours
    - Provision of drainage arrangements to maintain cleanliness and hygiene

- **Regulation and Management Framework**
    - Registration and licensing of street hawkers under a formal regulatory mechanism
    - Development of operating guidelines, including designated timings and code of conduct
    - Allocation of vending spaces through transparent and equitable processes

- **Traffic and Public Safety Measures**
    - Implementation of traffic management measures to ensure smooth vehicular and pedestrian movement
    - Provision of clear access paths for emergency services
    - Installation of signage to guide pedestrians and regulate vending activities

- **Environmental and Public Health Measures**
    - Implementation of solid waste management systems to handle daily waste generated by hawking activities
    - Promotion of hygiene and food safety practices among hawkers
    - Regular cleaning and maintenance of designated vending areas

- **Social Inclusion and Capacity Building**
    - Prioritization of vulnerable and low-income groups in allocation of vending spaces
    - Capacity-building programs for hawkers on business practices, hygiene, and compliance with regulations
    - Encouragement of community participation in planning and monitoring hawking zones

- **Monitoring and Sustainability**
    - Establishment of a monitoring mechanism to ensure compliance with regulations
    - Periodic review of hawking zones to respond to changing urban dynamics
    - Integration of street hawking into long-term urban development and land-use planning of Hala City

➢ **Size**

- Development of designated street hawking zones across key commercial, transport, and high pedestrian activity areas of Hala City.
- Allocation of approximately 8–12 organized hawking zones distributed across the city to ensure balanced coverage and minimize congestion.
- Provision of 300–400 standardized vending spaces (kiosks/carts/stalls) to accommodate existing and potential street hawkers.
- Development of clearly demarcated vending plots, pedestrian walkways, and buffer spaces to ensure safe and orderly movement.
- Installation of basic infrastructure including lighting, waste bins, drainage, and limited sanitation facilities at each hawking zone.
- Provision of signage and wayfinding elements to regulate vending activities and guide pedestrians and customers.
- Coverage of major commercial streets, market surroundings, transport nodes, and underutilized public spaces within Hala City.
- The project will directly benefit 300–400 hawkers and indirectly serve thousands of residents and visitors daily, improving urban order, economic activity, and public convenience.

- **SDG's Alignment**

I. Goal No.8: Decent Work and Economic Growth
The project supports SDG 8.3 and 8.5 by promoting inclusive economic opportunities for street hawkers, many of whom belong to marginalized communities. By formally integrating them into the urban economy, the initiative helps create decent jobs and fosters sustainable economic growth in the informal sector.

II. Goal No.11: Make Cities and Human Settlements Inclusive, Safe, Resilient and Sustainable
By allocating designated vending zones, the initiative supports SDG 11.2 and 11.3 by improving urban mobility, reducing sidewalk congestion, and promoting inclusive urban planning that accommodates all segments of society.

- **Implementing Authority**

Government of Sindh, Local Government, MC New Hala

- **Preliminary Cost Estimate**

Estimated Cost: 700 million Approx.

S. No.	Project Name	Estimated Cost in Millions	ADP	Non ADP	Status	
					Short Term	Long Term
Economic Development Projects						
1	Feasibility Provision for Fruit and Vegetable Market	150	-	Non ADP	**Short Term**	-
2	Procurement for land acquisation process for Fruit and Vegetale Market	500	-	Non ADP	**Short Term**	-
3	Provision For Fruit and Vegetable Market	300	-	Non ADP	**Short Term**	-
4	Feasibility Provision for Street Hawkers	100	-	Non ADP	**Short Term**	-
5	Procurement for land acquisation process for Street Hawkers	500	-	Non ADP	**Short Term**	-
6	Provision For Street Hawkers	100	-	Non ADP	**Short Term**	-

9.5.5 Immediate Action Plan for Core Urban Area

- **Modernization of Commercial Activity in the Core Urban Area**

To enhance business operations and stimulate investment, it is imperative to streamline and expedite the business licensing and permitting processes, thereby reducing administrative burdens. Additionally, the promotion of digital payment solutions and point-of-sale systems will facilitate transaction efficiency and improve financial management. The integration of smart technologies, such as energy-efficient street lighting and advanced security systems, into commercial properties will modernize infrastructure and boost operational efficiency.

Furthermore, engaging the community in the street design process is crucial to addressing local needs and preferences. Streets will be designed to support local businesses by incorporating features such as outdoor seating, effective signage, and enhanced visibility. Employing clear, visible signage will assist in directing customers and minimizing confusion, thereby managing foot traffic more effectively. The design will also include safe, well-marked crosswalks equipped with pedestrian signals and tactile paving for individuals with visual impairments. To enhance comfort and usability, street designs will incorporate amenities such as benches, trash bins, and street lighting.

I. Scope

The modernization plan for commercial activity in the core urban area includes the following key actions:

- **Rehabilitation of Shahi Bazar Area:** Revitalize the Shahi Bazar area by upgrading infrastructure, improving aesthetics, and enhancing the overall shopping experience for visitors.
- **Provision of Pedestrian Facilities:** Develop pedestrian-friendly infrastructure in the main bazaar area, including wide footpaths, safe crossings, and seating areas, to encourage foot traffic and support local businesses.
- **Provision for street Hawking:** Relocate existing street vendors to more suitable locations, reducing congestion in the bazaar area and improving traffic or pedestrian movement.
- **Implementation of Smart Technologies:** Install energy-efficient lighting, advanced security systems, and digital payment solutions to modernize commercial infrastructure and improve operational efficiency.
- **Incident Response and Security:** Develop an incident response plan and install high-resolution CCTV cameras to enhance security in commercial areas. Coordination with local law enforcement and emergency services will be emphasized to ensure a swift response to any incidents.

II. Size

The size and scope of the rehabilitation and modernization efforts in the main commercial area are outlined as follows:

Rehabilitation of Main Commercial Area – Activity wise cost in Millions				
S. No	**Area / Locality / Address**	**Length (rft)**	**Cost in PKR million.**	
			infrastructure	**Security**
	Rehabilitation of Main Commercial (CBD) Area ➢ Rehabilitation & Beautification of main Commercial areas: - Shahi Bazar	**1,863**	**40**	**10**
Total PKR Rs. Million			**50**	

Note:

- Commercial areas will be enlisted in Govt. Agency for all services of Trade, Retail, Marketing, Sale etc.
- All commercial areas security services are associated with combine effort of commercial trade union and local Govt.
- Commercial areas accessibility for daily users and marketers is well defined with ease.
- Provision of pedestrian facility in the Bazaar area.
- Banned heavy vehicles during peak hours.
- Provision for street hawking.

III. Preliminary cost estimate

A preliminary cost estimate will be provided, itemizing the costs associated with each of the activities listed above. The cost breakdown includes:

- Rehabilitation & Beautification of Shahi Bazar Area:
- Pedestrian Facilities Development:
- Main Road Upgradation in Bazaar Area:
- Provision for Street Hawker:
- Smart Technology Implementation:
- Incident Response and Security Measures:

Total Estimated Cost: 50 million

IV. Implementation Framework

- **Funding Sources:**
  - Municipal Budgets for CBD rehabilitation.
  - Provincial ADP grants for market modernization.
  - PPP Partnerships for smart technologies (CCTV, lighting, POS systems).
  - Commercial trade union contributions for security and facility upgrades.
- **Execution:** Works executed by the Municipal Committee with active participation from bazaar committees and trade unions.
- **Phasing:** First phase to prioritize Dargah Road (Congested hotspot), followed by Shahi Bazar.

10. ENVIRONMENTAL SETTING AND NATURAL DISASTER

10.1 Existing Situation

The physical environment of Hala city and the broader Matiari district is examined in terms of the air shed, watershed, geology, soil characteristics, hydrology, and seismicity. Baseline data on the air shed describe the climatic conditions and air quality. Similarly, data on the watershed describe hydrology, surface, and groundwater quality, as well as water availability. Geology, geomorphology, soil characteristics, and seismicity data are essential for evaluating terrestrial resources, agriculture potential, soil characteristics, and stability.

10.2 Topography & Geography

District Matiari, positioned in a strategically significant area of Sindh, Pakistan, is geographically located between longitudes 68°14'8" to 68°14'40" East and latitudes 25°26'20" to 26°5'43" North. This distinct positioning places the district in a region that is pivotal both for its agricultural potential and its connectivity to surrounding areas.

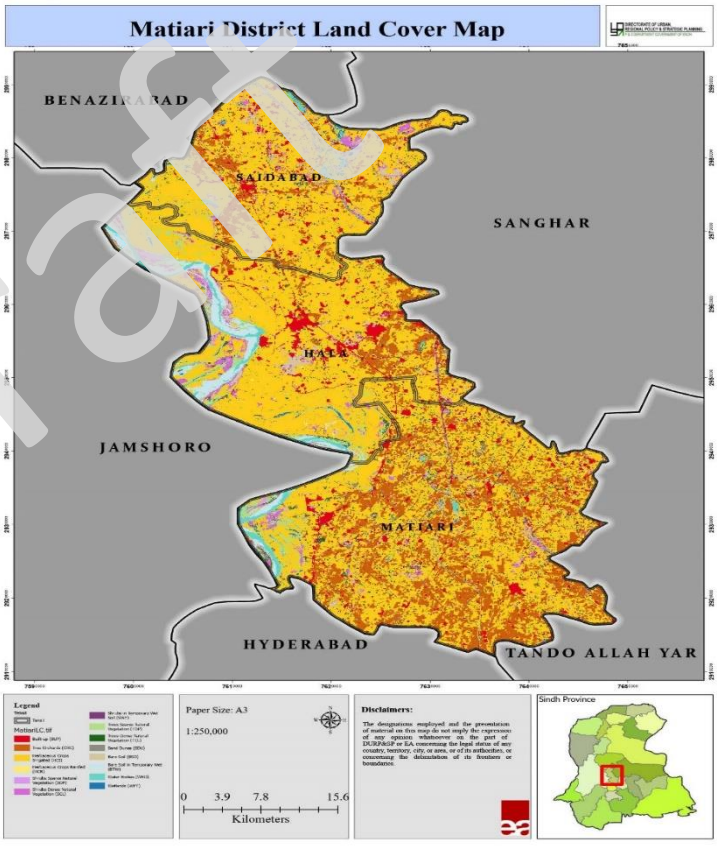


Figure 10-1: Matiari District Land Cover Map

Geographically, the District Matiari land area is part of Lower Indus Plain, more specifically flood plain of the Indus River system which is a vast alluvial plain that runs along the Indus River. As such the District area consists of flat land that slopes towards the river. Protective embankments or dykes had to be provided in view of the devastating floods of the past which used to submerge at least 20 to 40 km land on either side of the bank. The Hala Reserved Forest area has accordingly been embanked. The average elevation of the district is 50 m above mean sea level.

The topography within 2 miles of Matiari is essentially flat, with a maximum elevation change of 62 feet and an average elevation above sea level of 83 feet. Within 10 miles is essentially flat (157 feet). The area within 2 miles of Matiari is covered by cropland (93%), within 10 miles by cropland (59%) and bare soil (29%), and within 50 miles by cropland (51%) and bare soil (42%).

District Matiari, nestled in the fertile Indus basin, presents a topographical landscape dominated by expansive, flat plains, making it exceptionally conducive to agriculture. The district's geology is significantly influenced by the Indus River, which flows along its western border, depositing rich silt and sandy loam along its banks. These riverine deposits contribute to the district's soil profile, characterized predominantly by loamy textures - a blend of sand, silt, and a smaller proportion of clay. This unique soil composition, enriched by alluvial deposits, endows the district with extraordinarily fertile lands, ideal for a diverse range of agricultural activities. With minimal barren land, most of Matiari's terrain is arable and actively cultivated, underscoring the district's reputation as a thriving agricultural hub.

10.3 Ecological Baseline

Being in the Indus basin, this district has hardly any barren lands. Only a few lands (as seen in the irrigation map below) are barren while the rest are quite fertile croplands. A well-developed irrigation system is present to supplement the agriculture activities in the area.

- **Wildlife**

The hog deer (Axis porcinus) is vulnerable ungulate species that was the key species of the district area and reserve forest present in the district. Wild boar (Sus scrofa) is another ungulate commonly found in forest along the Indus River. The wildlife department and local people report that the population of this species in the district has recently grown. The Indian crested porcupine (Hystrix indica) is reported from some parts of the district, but they have not been seen for some time. Bengal fox (Vulpes bengalensis) and desert cat (Felis silvestris lybica) were the common species of the district. The population of Bengal fox depends highly on the availability of rodents in large numbers. The desert cat is common in the scrub areas of the district. It is threatened because of loss of habitat, and being hunted for its fur, as well as being killed when it attacks peoples' domestic fowl. Other common large mammals that are reported from the area include palm squirrels (Funambulus palmarum). The common species of small mammals that are reported from the district are cairo spiny mouse (Acomys cahirinus), house rat (Rattus rattus), house mouse (Mus musculus), pigmy gerbil (Gerbillus henleyi), Indian gerbil (Tatera indica), and desert jird (Meriones hurrianae).

- **Birds**

The most commonly observed bird is the white-cheeked bulbul (Pycnonotus leucotis), which is the most numerous species in the scrublands and, although found mainly in the plains, is also common on slopes. Other common birds are the little brown dove (Spilopelia senegalensis), black crowned finch lark (Eremopterix nigriceps), Persian short-toed lark (Calandrella acutirostris), Indian short toed lark (Calandrella brachydactyla), lesser white throat (Sylvia curruca), common white throat (Sylvia communis), house bunting (Emberiza sahari), gray-necked bunting (Emberiza buchanani), and crested lark (Galerida cristata).

Less common birds observed and recorded in the past include the Indian sparrow hawk (Accipiter nisus), tawny eagle (Aquila rapax), common kestrel (Falco tinnunculus), gray partridge (Perdix perdix), Indian sand grouse (Pteroclididae), pintail sand grouse (Pterocles alchata), Collared dove (Streptopelia decaocto), great gray shrike (Lanius excubitor), gray-backed shrike (Lanius tephronotus), hooded wheatear

(Oenanthe monacha), Rufous treepie (Dendrocitta vagabunda), hoopoe (Upupa), pied wagtail (Motacilla alba), black winged stilts (Himantopus himantopus), red-wattled lapwings (Vanellus indicus), sandpiper (Scolopacidae), white backed vulture (Gyps africanus), griffon vulture (Gyps fulvus), black vulture (Coragyps atratus), golden eagle (Aquila chrysaetos), rock partridge (Alectoris graeca), and black-shouldered kite (Elanus axillaris).

- **Livestock**

Locals also maintain stocks of cows, goats, and sheep as a second source of livelihood after agriculture. Livestock and ruminants include: Domestic Goat (Capra hircus) Bakri/Bakra; Domestic Sheep (Ovisaries) Bhairru/Bhairr; Domestic Cattle (Bostaurus) Gaon/Dhaggo, Dhaggi (male, female); Domestic Donkey (Equusasinus) Gadduh/Gadah.

10.4 Ecologically Sensitive Areas

There are no ecologically protected areas found in District Matiari.

10.5 Riverine Forests

Khyberani Forest is situated close to river Indus near Matiari city, at a distance of about 5 km from National Highway. The forest consists of 25 compartments and the total area of forest is about 3,000 acres. It has been declared a Reserved Forest by the Sindh Forest Department. Like some other forests in Sindh, this forest is also facing challenges like shortage of water, encroachments and illegal logging. Khyberani Forest was also riverine forest which depended on Indus River water prior to the construction of Sukkur Barrage. Ten villages are located along the forest boundary. More than 50,000 cattle of these villages solely depend on these forests for grazing. Deforestation and conversion of the forestland into agricultural land is persistent. Influential people now occupy about 2,000 acres. Wildlife habitat is being degraded because of agricultural activities. The wildlife including the endangered hog deer are under threat to be vanished from this habitat.[52]

10.6 Ambient Air Quality and Noise

Ambient air quality monitoring was conducted at three locations in Hala City, representing different activity zones: Dargah Makhdoom Sarwar Hala (religious), Shahdadpur Chowk Hala (commercial), and near Government Boys High School Old Hala (educational). This provided a comprehensive assessment of air quality across varied environments.

Findings

All parameters were assessed against Sindh Environmental Quality Standards (SEQS) – November 2023.

- **Air Quality**
  - All parameters (CO, NO_2, NO, O_3, PM_{10}, $PM_{2.5}$, SPM, Pb, SO_2) remained within SEQS limits at all three sites.
  - CO levels recorded were:

[52] WWF, ECOLOGICAL ASSESSMENT OF FAUNA at Khyberani Forest, District Matiari, Sindh. Baseline Survey, 2010 - 2011

- 2.86 mg/m³ at Dargah Makhdoom Sarwar Hala (SEQS limit: 10 mg/m³)
- 3.58 mg/m³ at Shahdadpur Chowk Hala (SEQS limit: 10 mg/m³)
- 2.86 mg/m³ near Government Boys High School (SEQS limit: 10 mg/m³)

➢ **Noise Levels**
  - All locations were within the SEQS limit (75 dB(A)).
  - Specific noise levels were not explicitly reported but confirmed within limits at all sites.

➢ **Implications**
- **Air Pollution Risks**: CO levels, although within limits, show variation across sites, suggesting localized emissions mainly from traffic and commercial activities, highlighting the need for targeted CO reduction measures.
- **Positive Indicators:** Consistently low levels of lead (Pb) and sulfur dioxide (SO_2) across all locations indicate minimal industrial emissions and contribute to a healthier atmospheric profile.
- **Noise Pollution:** Noise levels are well within acceptable limits, reflecting a relatively controlled acoustic environment even in busy and diverse activity zones.
- **Planning Insight:** The overall satisfactory air quality supports current control measures, but continuous monitoring and focused mitigation of localized pollution sources can enhance urban environmental health in Hala City.

10.7 Groundwater Salinity

[53]Groundwater salinity in Sindh is widespread. In 1959, a program of investigations was started by Water and Power Development Authority (WAPDA) by the name of the Lower Indus Project (LIP). Boreholes, varying from 30 to 90 m deep, were drilled in the Guddu, Sukkur and Kotri Barrage commands, to determine aquifer characteristics and the quality of groundwater in horizontal and vertical scales. The general pattern of groundwater distribution in the Lower Indus Plains is one of good quality water immediately adjacent to the river, with increasing salinity as we move away from the river (Figure 1.12). A lesser quantity of good quality water is available on the right bank of the river than on the left. This is due to the proximity of limestone hills on the right bank as well as the poor aquifers associated with piedmont plains. Another feature of importance is the complete absence of usable groundwater in the deltaic area south of Hyderabad, except some shallow pockets in the recently abandoned riverbeds of the Gaja Command.

Throughout the region, the salinity of groundwater increases with depth and no case has been recorded in Sindh where saline water overlies fresh water. Based on the assessments of LIP, it is estimated that 71% of Sindh's irrigated area has groundwater that is too saline (>1500 ppm) for irrigation. However, the picture improves if one looks at shallower depths (<15 m), where salinity is less widespread. According to Ahmad, there are many sites where shallow useable groundwater exists. The total fresh groundwater zones at shallow depth (15 m) are tentatively estimated as spreading over 46% of the area. However,

[53] Source: Ahmad, N. Groundwater Resources of Pakistan (Revised); Shahzad Nazir: Lahore, Pakistan, 1995)

further detailed groundwater investigations are needed for precise assessment of different groundwater qualities at shallow depths

10.8 Seismicity

According to the Seismic zoning map of Pakistan (2015), Matiari district lies in Zone 2A which corresponds to peak ground acceleration (PGA(g)) of 0.08 to 0.16 and a possibility of minor to moderate seismic hazards i.e. probability of earthquakes of intensity (MM Scale) 6 to 7.5.

10.9 Issues and Problems

- Water logging and salinity
- Water Contamination
- Low quality of surface water that is not fit for drinking
- Seismic Risk
- Aging of surface drainage canal system
- Inner city air is polluted by high volume of traffic.

10.10 SWOT Analysis

Strengths	Weakness	Opportunity	Threats
ENVIRONMENT			
Urban Area & Areas Suitable for Urban Development			
1. Land available for future development within town urban boundary 2. New housing schemes are making a major economic factor on the city.	1. Loss of agricultural land through land development for housing purpose 2. High Land prices. 3. Lack of Basic utility services for new development.	1. Mixed land uses may create activity centres 2. High density will overcome housing shortages	1. Land grabbing 2. Slums 3. Unplanned growth 4. Threat to agricultural land 5. Private sector may increase the cost of services
Land			
1. Flat fertile land 2. Rural rich fertile agriculture land that produces quality crops	1. Unplanned land uses 2. Limited availability of govt. land for future spatial growth 3. Incomplete development of agricultural land	1. If treated through appropriate urban design principals & standards, can be transmitted into mixed land uses and strong activity centres.	1. Conversion of agriculture land for development purpose. 2. Formation of informal settlements like slums. 3. Water scarcity.

Strengths	Weakness	Opportunity	Threats
	parcels (scattered agricultural growth) 4. Poor administration by agencies monitoring urban growth of the city		4. Land is utilized for the disposal of garbage disposal.
Climate			
1. The city enjoys a relatively stable temperature range throughout the year.	1. Limited Water Management Infrastructure. 2. Vulnerability to Extreme Weather Events.	1. Investment in Flood Mitigation Measures. 2. Expansion of Economy.	1. Climate Change Impacts 2. The occurrence of flash floods can disrupt economic activities, including agriculture, transportation, and commerce leading tp financial losses for businesses and households.
Air			
1. Rich Air quality is good for human health, and also keeps ecological balance in atmosphere.	1. Exceedance of Limits. 2. Limited Focus on Specific Pollutants.	1. Exceedances observed in PM 2.5 and Noise levels present opportunities for implementing mitigation strategies and technological interventions to reduce pollution levels and enhance overall air quality. 2. Community Engagement in reducing air pollution.	1. Urbanization and industrialization may exacerbate air quality issues in the future.

Strengths	Weakness	Opportunity	Threats
Fresh Water Bodies			
1. Water bodies (0.93%) offer natural beauty. 2. Hala Town benefits from its primary water supply sourced from abundant groundwater, which ensures a relatively stable and accessible water source for its residents. 3. The city has a well-documented historical water supply infrastructure, with phases like Urban Water Supply Scheme successfully catering to the town's needs, indicating a foundation that can be built upon and improved.	1. Water contamination due to waste disposal 2. Hala Town's reliance on a single source of groundwater for its water supply increases vulnerability to depletion and contamination, which could be exacerbated by insufficient monitoring and modernization of aging infrastructure.	1. Utilization of water bodies for eco-tourism, recreational activities, and sustainable resource management to boost local economies 2. Temporary water bodies can be used for fish farming. 3. Hala Town has the opportunity to diversify its water sources and improve water security by exploring sustainable practice such as rainwater harvesting and the potential use of nearby river resources, accompanied by investments in modern water treatment technologies.	1. Contaminated water is a serious threat for human health 2. Standing water gives birth to diseases like Malaria. 3. Environmental degradation 4. Water logging 5. The increasing demand for water due to population growth, coupled with potential impacts of climate change, poses a significant threat to the sustainability of Hala Town's groundwater supplies, risking long-term water scarcity and quality issues.

10.11 Policy Guidelines[54]

- Enhancing role of local governments in sustainable management of natural resources
- Conservation of biological diversity, protection and sustainable use of indigenous flora and fauna
- Sustainable Management in Reserved, Protected, Flora and Fauna
- Management of irrigated and linear plantations
- Promotion of indigenous species
- Increase the efficiency of surface drainage.

10.12 Strategic Development Plan

i. Long Term Plan

- Drainage can be improved on many sites and is the first thing to consider once a waterlogging problem has been identified. Options might vary from shallow surface drains (ie. Spoon- and 'W'-drains) to more intensive drainage using wide-spaced furrows, to the intensive drainage form of raised beds
- Achieving sustainable development, while overcoming environmental challenges such as land degradation, watersheds and marine fisheries, deforestation, waste management and pollution control, and climate change
- Multi-pronged approach to fisheries management should be adopted that takes account of economic, environmental, and social performance

ii. Short Term Plan

- Ensuring environmental sustainability
- Need of Permits to discharge waste and pollutants into the environment;
- Restoration and maintenance to preserve ecological cycles, functions and services of environment
- Increase the productivity of rangelands
- Provide recreational facilities for public by improving forest parks, wild life sanctuary
- Rehabilitate degraded ecosystems and create environmental awareness
- Develop and implement policies that integrate the objectives of conservation and development to reduce pressure and protect environmental values and conserve biodiversity
- Fostering public-private partnerships
- Rehabilitation of Irrigated plantation
- Enhance Rangeland production and planting fodder trees for farmer community
- Improvement and Rehabilitation of Forests Parks
- Afforestation of Blank Reaches along Important Highways

[54] National Forest Policy 2010

11. DISASTER RISK MANAGEMENT

District Matiari, nestled in the fertile Indus basin, presents a topographical landscape dominated by expansive, flat plains, making it exceptionally conducive to agriculture. The district's geology is significantly influenced by the Indus River, which flows along its western border, depositing rich silt and sandy loam along its banks. These riverine deposits contribute to the district's soil profile, characterized predominantly by loamy textures - a blend of sand, silt, and a smaller proportion of clay.

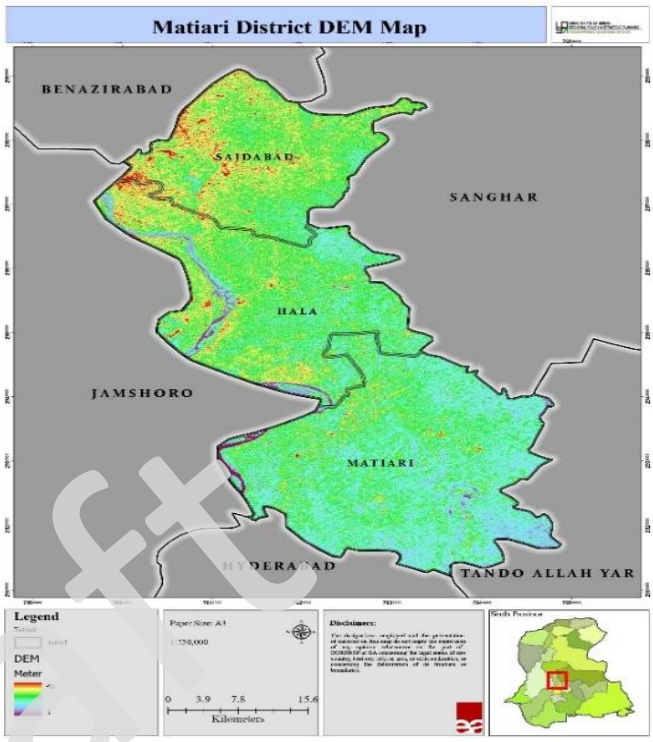


Figure11-1 DEM Map of Matiari District

This unique soil composition, enriched by alluvial deposits, endows the district with extraordinarily fertile lands, ideal for a diverse range of agricultural activities. With minimal barren land, most of Matiari's terrain is arable and actively cultivated, underscoring the district's reputation as a thriving agricultural hub. The harmonious blend of flat plains and fertile soils not only defines the district's agricultural landscape but also forms the backbone of its economy, supporting the livelihoods of a significant portion of its population. Consequently, any developmental initiatives in Matiari, especially those concerning land use, water management, and agricultural planning, must take into account these intrinsic environmental characteristics, ensuring sustainable and productive utilization of this rich natural endowment.

Given District Matiari's flat alluvial plains, fertile loamy soils, and extensive agricultural land nourished by the Indus River, disaster risk management and development planning must prioritize. (i) Strengthening resilience of infrastructure to withstand geological and climatic challenges; (ii) improving early warning and response systems tailored to flood, drought, and seismic risks; (iiI) ensuring effective drainage and land management to reduce flood vulnerability; and (iv) enhancing community awareness and capacity-building for disaster preparedness and recovery aligned with local environmental and socio-economic conditions.

i. Floods/Rains

The catastrophic monsoon floods of 2022 left a profound mark on numerous districts across Pakistan, with the Sindh province bearing a substantial brunt of the devastation. An extensive land area of 25,440 km², translating to approximately 6,286,362 acres or 18% of Sindh's total land, was engulfed by floodwaters in August 2022. In District Matiari, rainfall reached up to 716 mm from July to August 2022, the highest in the last decade. This led to significant losses, including 12 human lives, 14 severe injuries, and the displacement of 52,498 families who lost their homes, agricultural produce, and livestock. Currently, 651,840 people from 116,400 families are directly affected, with 104,760 individuals displaced

and 35,855 people living in relief camps. The Provincial Government, through the relief department, has declared the entire district of Matiari as a climate-hit area.[55]

Among the most severely affected districts, Kambar Shahdad Kot was at the forefront with 60% of its area flooded, followed by Badin with 43%, Dadu at 28%, Jacobabad with 84%, and Sujawal at 21%.

Along with the demographic loss, due to floods 2010/2011, the loss to agriculture sector exacerbated the sources of livelihood for the people of this district. The following table shows the loss to agriculture sector of this district.

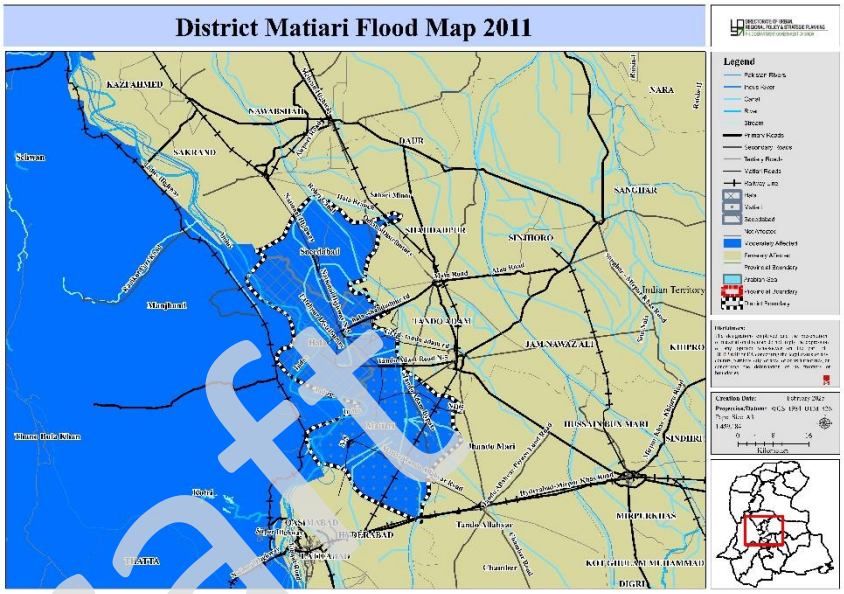


Figure 11-2 Flood Map of Matiari 2011

11.1 Floods

Naushahro Feroze District has been severely affected by floods in 2010, 2011, 2012-13, and 2022. When the River Indus receives high flows from its tributaries, adjoining areas including Naushahro Feroze face serious risk of inundation. During the 2011 floods, extensive parts of the district were affected, with thousands of people impacted. The floods caused multiple deaths and injuries, and damaged large numbers of houses and public infrastructure. Vast tracts of agricultural land were submerged, leading to devastating losses in crops and livelihoods. Basic Health Units and Rural Health Centers also suffered significant damage, reducing access to healthcare in flood-affected areas.

11.2 Impacts of floods 2022

The 2022 monsoon season brought equally destructive impacts to Jamshoro:

- **Population:** the affected population were 250,000 (34.70%) and the displaced number of people were 51,000. 16 death and 104 people were injured, 6,788 livestock losses were recorded.[56]
- **Housing:** 46,705 houses were affected, 20,043 homes suffered partial damage, including 26,662 fully destroyed.

[55] SITREP-28th Aug,2022 (srso.org.pk)
[56] Flood 2022 In Sindh (pdma.gos.pk)

- **Agriculture:** About about 140,833 acres (46.70%) crops were damaged or lost during the 2022 flood in Matiari District.[57]
- **Livestock:** Thousands of animals drowned or fell sick due to lack of fodder, shelter, and clean water.[58]

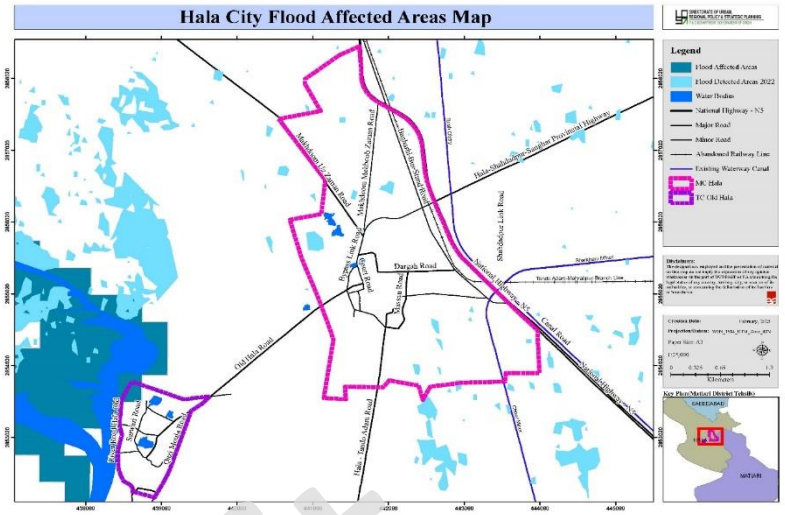


Figure 11-3: Flood Affected Areas in Hala City during Flood 2022

11.3 Flood Risk Areas

I. Flood Risk Areas

The central and western parts of Hala City, characterized by larger catchment areas, are more susceptible to flooding. The presence of major roads in these regions could exacerbate the risk of flooding and waterlogging.

II. Railway Lines

The map shows both existing and abandoned railway lines, which play a significant role in the city's drainage patterns and potential waterlogging areas.

11.4 Food Security

Despite the agricultural potential of Matiari, the district remains in a food crisis phase (IPC Phase 3) as of early 2024. Floods severely damaged crops, livestock, and infrastructure, disrupting market access and household incomes. Inflation and rising food prices have further limited food availability and affordability. Displaced families and vulnerable groups, especially women and children, continue to face high levels of food insecurity. Humanitarian aid is ongoing but insufficient, while damaged roads, bridges, and irrigation systems hinder recovery and agricultural productivity.

11.5 Earthquake

The Seismic zoning map of Pakistan (2015) places Matiari in Zone 2A and 2B which corresponds to possibility of minor to moderate seismic hazards i.e. probability of earthquakes of intensity (MM Scale) 6 to 7.5.

Accordingly, a seismic risk factor of 0.1 needs to be incorporated in the design for constructions and installations in the coastal zone, for operational basis earthquakes (OBE) pertaining to damage due to moderate level earthquakes.

[57] Sindh Map of Crop Area Damaged 24-10-2022 (pdma.gos.pk)

[58] Flood 2022 In Sindh (pdma.gos.pk)

11.6 Heatwave

The cause of heatwave in Sindh can include a combination of meteorological factors such as high temperatures, low humidity, and stagnant air masses. Urbanization, deforestation, and climate change can also contribute to the frequency and severity of heat waves in the region.

To prevent heatwaves in Sindh, several measures can be taken, including:

- Implementing heat health warning systems and public education campaigns to increase awareness of the risks of heat waves and ways to stay cool and hydrated.
- Improving access to water and electricity to ensure people have access to cooling systems.
- Implementing measures to reduce greenhouse gas emissions and mitigate the effects of climate change.
- Implementing measures to conserve water and reduce water usage to ensure that there is enough water available for cooling and other essential uses during heatwaves.
- Improving urban design and reducing the urban heat island effect by increasing green spaces and using reflective surfaces to reduce heat absorption.[59]

11.7 Droughts

A drought is generally defined as a period of below-average precipitation in a given region, resulting in prolonged shortages in the water supply. A drought can last for months or years and can have a substantial impact on the environment, ecosystem, and agriculture of the affected region. Sindh is experiencing an increase in the frequency and severity of drought due to a rise in temperatures and a decrease in the amount of rainfall during the summer season. It is rapidly becoming one of the worst disasters in Pakistan as a result of the drought in Sindh. According to the Pakistan Meteorological Department, severe to extreme drought-like conditions have emerged over most of southern Pakistan. Sindh faces moderate to severe drought conditions in 8 districts, the drought hazard analysis showed that the Qambar Shahdad Kot, Shikarpur, Jacobabad, Sanghar, Khairpur, Sukkur, Tharparkar and Umerkot are exposed to very severe drought hazard class. The Sindh Province is historically susceptible to drought. History shows major droughts in the distant past, with more recent dry periods still within living memory. Sindh faced the worst drought situation in 1871, 1881, 1899, 1931, 1942, 1999, 2003, 2020, 2021 and 2022.

The 1999 drought persisted till the year 2002. Around 1.4 million people, 5.6 million cattle head, and 12.5 million acres of the cropped area were affected. The groundwater depleted to 30-40 feet, and the quality became poor. Between October 2020 and March 2021, the impact of La Nina caused below-normal rainfall in drought-prone areas of Sindh (-77.3%). Several districts in the province experience drought conditions which have resulted in increased food insecurity. An estimated 1.8 million people are expected to experience acute food insecurity and 530,000 people emergency levels of food insecurity from March to June 2021 in drought-affected districts, according to the Food Security Sector.

[59] Heatwave - PDMA SINDH

Types of Droughts

Meteorological Drought is the amount of dryness and the duration of the dry period. Atmospheric conditions that result in deficiencies of precipitation change from area to area.

Hydrological Drought is associated with the effects of periods of precipitation shortages on water supply. Water in hydrologic storage systems such as reservoirs and rivers is often used for multiple purposes such as flood control, irrigation, recreation, navigation, hydropower, and wildlife habitat. Competition for water in these storage systems escalates during drought and conflicts between water users increase significantly.

Agriculture Drought mainly affects food production and farming. Agriculture drought and precipitation shortages bring soil water deficits, reduced groundwater or reservoir levels, and so on. Deficient topsoil moisture at planting may stop germination, leading to low plant populations.

Socioeconomic Drought occurs when the demand for an economic good exceeds the supply as a result of a weather-related shortfall in the water supply.[60]

11.8 Air quality

The Ambient Air Quality Test (09-Nov-2023) conducted at three strategic locations: Dargah Makhdoom Sarwar Hala, Shahdadpur Chowk Hala, and Near Government Boys High School Old Hala. While most pollutants remained within Sindh Environmental Quality Standards (SEQS).

The results indicated that all measured parameters, including Carbon Monoxide (CO), Nitrogen Dioxide (NO_2), Nitrogen Oxide (NO), Ozone (O_3), Particulate Matter (PM10 and PM2.5), Suspended Particulate Matter (SPM), Lead (Pb), Sulfur Dioxide (SO_2), and Noise, were within the Sindh Environmental Quality Standards (SEQS) limits. For example, Carbon Monoxide levels were 2.86 mg/m³ at Dargah Makhdoom Sarwar Hala, 3.58 mg/m³ at Shahdadpur Chowk Hala, and 2.86 mg/m³ near Government Boys High School, all well below the SEQS limit of 10 mg/m³. Similarly, other pollutants like NO_2 and SO_2 also remained within the prescribed limits, ensuring that the ambient air quality is not posing any significant health risk to the residents.

Without targeted interventions to curb vehicular emissions, manage traffic flow, and improve roadside infrastructure, Hala risks a gradual decline in air quality. This may lead to increased respiratory illnesses, cardiovascular stress, and overall environmental degradation in the city.

11.9 Waste Crisis

Hala City is experiencing an escalating solid waste management crisis. According to a recent survey, 71% of residents dispose of waste informally, throwing it outside their homes, while only 28% rely on municipal sweepers. The city lacks a formal landfill and proper segregation system, with waste often dumped at

[60] Drought - PDMA_SINDH

unauthorized sites like near Village Parhiyar and near the highway within city limits, contributing to environmental degradation and public health risks.

Current waste generation stands at 39,808 kg/day (2025) and is projected to surge to 71,123 kg/day by 2045, driven by population growth. The municipality manages waste collection with limited resources, operating three shifts daily using a fleet that includes six sanitation rickshaws, two tractors, two loader tractors, and one Master Mazdas. Despite these efforts, the lack of infrastructure and workforce capacity hampers efficient waste management.

Hazardous waste, especially from healthcare facilities generating approximately 64.68 kg/day, remains unmanaged due to the absence of segregation and treatment systems, posing serious health threats. Without strategic investments in formal landfills, recycling, and community awareness, solid and hazardous waste will continue to present a mounting environmental and health crisis for Hala City.

11.10 Water contamination

Groundwater quality in Hala City poses a serious public health concern. Recent water quality tests conducted at two key locations the Municipal Committee Hala and Dargah Ali Fajeer Hala confirm bacterial contamination, rendering the water unfit for drinking. With a turbidity level of 6, surpassing the standard value of <5, the water appears cloudy and likely contains suspended particles. A pH level above 8 indicates alkalinity, impacting the water's taste and hinting at possible corrosive issues.

The entire city depends solely on groundwater extracted through tube wells and hand pumps, as no formal surface water supply scheme or piped network currently exists. This reliance, combined with the absence of treatment infrastructure, significantly elevates the risk of waterborne diseases.

Findings from a socio-economic survey further underscore the gravity of the issue:

- 81% of residents consider the water unsafe for consumption.
- 33% report cases of diarrhea,
- 8% suffer from gastrointestinal infections, and
- 10% have experienced typhoid fever, directly linked to poor water quality.

Without urgent intervention including disinfection, improved water treatment, and infrastructure upgrades the city remains vulnerable to outbreaks of cholera, diarrhea, and other waterborne illnesses, especially in flood-prone and low-income neighborhoods.

11.11 Public Safety

Public safety is a principal responsibility at every level of governance—Federal, Provincial, Divisional, and District. In the context of increasing security challenges, especially those stemming from extremism and terrorism, crowded public spaces remain highly vulnerable. According to the National Internal Security Policy (2018-2023) and guidelines by NACTA, such locations are primary targets due to their accessibility, footfall, and potential for widespread disruption.

- **Crowded Places**

Terrorists often focus on high-density, high-visibility areas that offer opportunities to create mass panic, loss of life, or political/economic destabilization. Hala City contains numerous such crowded places which, without adequate protection, are at risk.

- **Identification of Land Uses for Potential Terrorist Attacks**

Based on field assessment, the following land uses in Hala City have been identified as potential high-risk zones due to high foot traffic and public importance:

Table 11-1: Potential Terrorists Threat

S. No	Landuse	Terrorist Threat
1	**Education**	Secondary Schools/College
2	**Health**	Hospitals/Medical Collages
3	**Commercial**	Shahi Bazar/Sabzi Mandi
4	**Religious**	Eid Gah / Shrines/Minority Religious Places/Imam Barghas
5	**Government Offices**	AC office/Judicial Complex/Police Station/Registrar Office/MC
6	**Recreational**	Parks & playground
7	**Transportation**	Bus Stop/Railway Station

Despite these high-risk areas, Hala City currently lacks a robust surveillance system, particularly CCTV coverage in commercial and public zones. The absence of incident response protocols, emergency preparedness, and community policing frameworks further amplifies the risk.

Authorities have yet to formulate or implement a comprehensive public safety plan addressing the full spectrum of terrorism-related threats, including:

- Prevention
- Crisis management
- Incident response
- Business/life continuity
- Post-event recovery

- **Possible Terrorist Intensity Zones in Hala**

  Consultants have identified the most visited and crowd-dense areas in Hala City based on field observations. These zones match closely with the land use types identified above and are considered priority areas for public safety upgrades.

Immediate steps such as installation of surveillance systems, routine security drills, coordination with law enforcement agencies, and public awareness campaigns are strongly recommended to reduce vulnerability and build resilience.

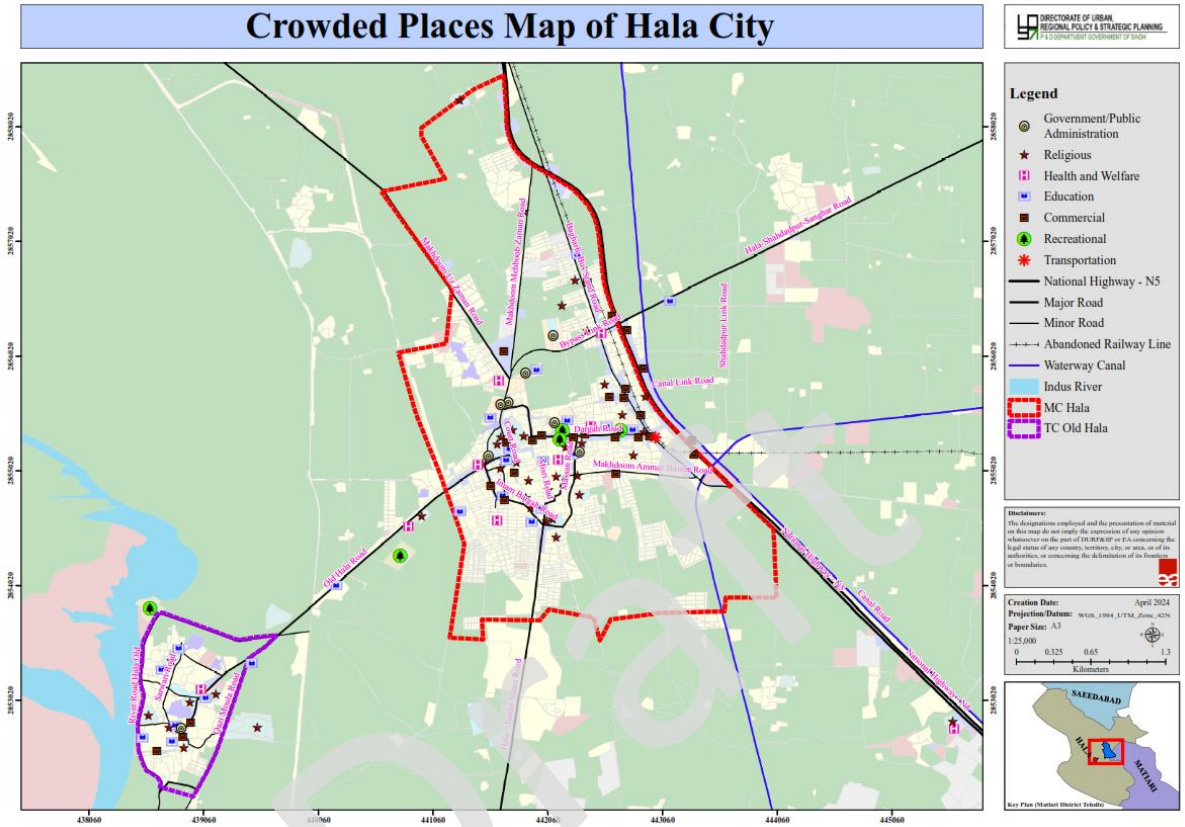
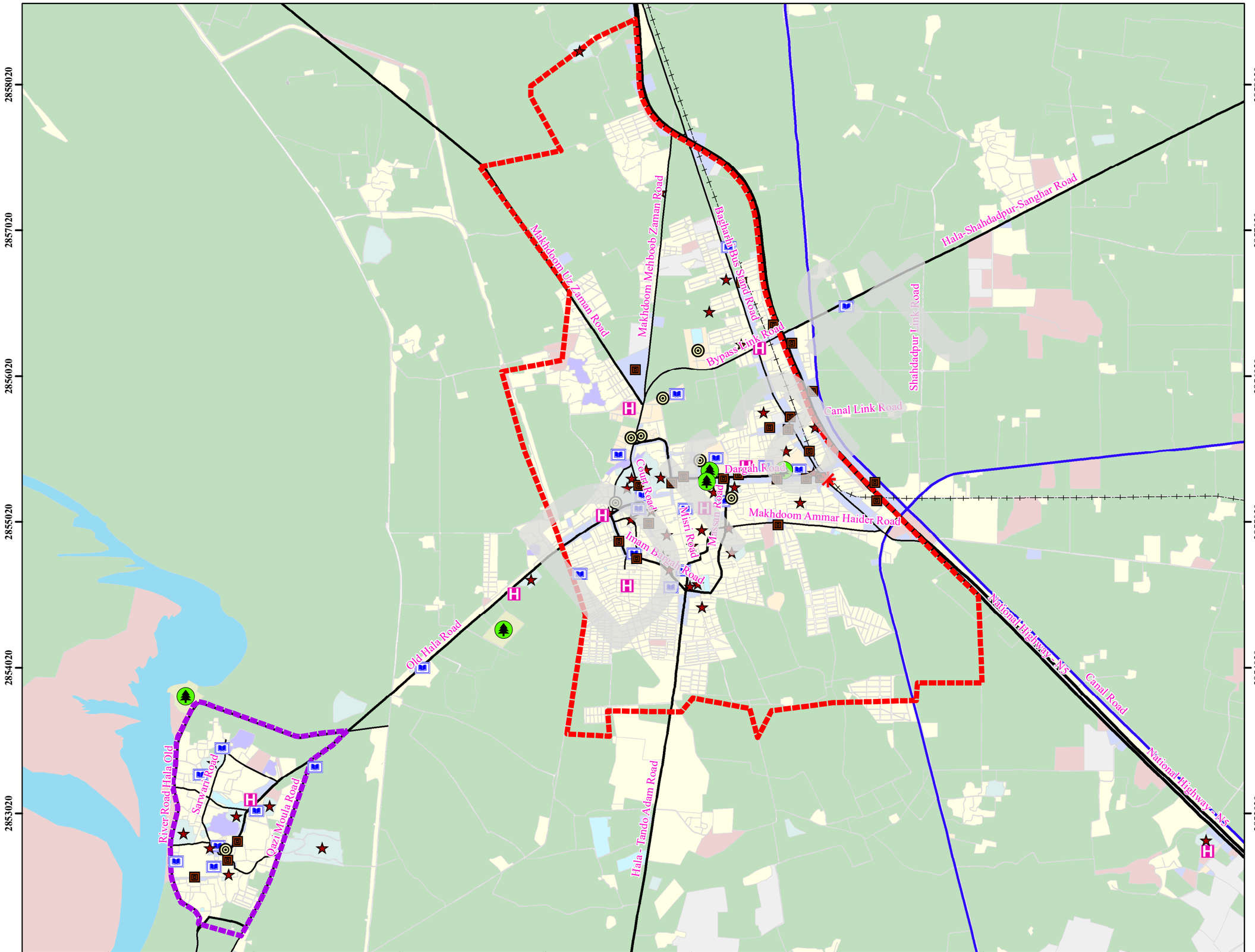


Figure 11-4: Crowded Places Map of Hala Town

Crowded Places Map of Hala City

DIRECTORATE OF URBAN, REGIONAL POLICY & STRATEGIC PLANNING
P & D DEPARTMENT GOVERNMENT OF SINDH



Legend

- Government/Public Administration
- Religious
- Health and Welfare
- Education
- Commercial
- Recreational
- Transportation
- National Highway - N5
- Major Road
- Minor Road
- Abandoned Railway Line
- Waterway Canal
- Indus River
- MC Hala
- TC Old Hala

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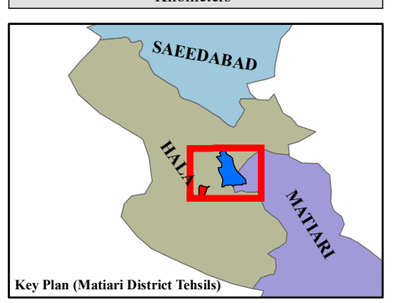


Key Plan (Matiari District Tehsils)

Institutional & Policy Framework

Disaster risk management in Matiari District, including Hala, is governed by the National Disaster Management Act, 2010 and the Sindh Provincial DRM Policy. At the provincial level, the Provincial Disaster Management Authority provides overall policy direction, while at the district level the District Disaster Management Authority functions as the primary coordinating institution under the chairmanship of the Deputy Commissioner. The DDMA integrates all key line departments including irrigation, health, education, agriculture, livestock, police, social welfare, and works and services, along with representation from the business community, NGOs, civil society, municipal committees, and elected representatives.

Within this framework, municipal committees hold a central role as the immediate service delivery institutions in urban areas. They are responsible for maintaining municipal infrastructure such as drainage, sewerage, water supply, solid waste management, and fire services, all of which are critical for disaster preparedness and response. During emergencies, municipal committees provide frontline support through dewatering operations, restoration of sanitation services, clearance of debris, fire safety response, and ensuring continuity of essential urban utilities. Their close coordination with taluka and union councils allows for rapid mobilization of resources and localized interventions.

The District Emergency Operation Centre supports the DDMA by providing early warning dissemination, monitoring, inter-agency coordination, and public communication. At the local level, taluka administrations and union councils translate district-level policies into community action. Union councils, as the lowest governance tier, engage communities in preparedness, advocate for resources, and support small-scale initiatives such as rainwater harvesting, evacuation planning, and food storage. Community-based organizations complement these efforts by mobilizing volunteers for early warning, first aid, evacuation, search and rescue, and firefighting.

Despite this multi-tiered structure, key challenges persist. Stakeholder participation in the DDMA is often uneven, with limited active involvement from certain departments, municipal authorities, and civil society actors. This weakens coordination, delays rehabilitation, and reduces the effectiveness of early warning systems. Municipal committees, while central to service delivery, frequently lack the equipment, staffing, and financial capacity to sustain disaster management operations, especially in flood-prone and densely populated areas.

Strengthening this institutional and policy framework requires embedding DRM functions across all levels of governance. The DDMA must ensure regular training, simulation exercises, and coordination meetings with taluka administrations, municipal committees, and union councils. Municipal committees need targeted investments in equipment, technical staff, and contingency planning to enhance their ability to respond swiftly to urban disasters. Greater engagement of NGOs, the private sector, and civil society will ensure a more inclusive, accountable, and resilient system.

In summary, Matiari institutional framework for disaster risk management is multi-layered, with the Provincial Disaster Management Authority setting policy, the DDMA ensuring district-wide coordination, municipal committees leading service delivery in urban areas, taluka and union councils implementing actions at the community scale, and CBOs providing the first line of defense. If strengthened and made more participatory, this system can significantly reduce vulnerabilities, improve preparedness, and enhance resilience to floods, droughts, heatwaves, and other hazards that regularly impact Matiari and Hala.

11.12 Issues and Problems

- Damage to housing, agriculture, and livelihoods → increased poverty.
- High risk zones not mapped/managed for urban expansion.
- High dependence on agriculture without resilience measures.
- Food insecurity despite production due to distribution and access gaps.
- Lack of cold chains and storage → post-harvest losses in disasters.
- No enforcement of seismic building codes in urban growth.
- Poor resilience of semi-pucca and katcha housing.
- Lack of green cover/urban greening increases heat vulnerability.
- Poor water management, no early warning for drought.
- Crop/livestock losses directly hitting rural economy.
- Public health risks (cholera, diarrhea, typhoid).
- Hazardous waste (healthcare) unmanaged.
- No structured municipal system → crisis of urban governance.
- Chronic respiratory and cardiovascular health risks.
- Noise-related stress and productivity loss.
- Weak monitoring and mitigation mechanisms.
- Lack of protective security measures in crowded places.
- Absence of emergency evacuation and response plans.
- Disaster risk reduction (DRR) not mainstreamed in planning.
- Coordination gaps among PDMA–DDMA–municipal–UC levels.
- Community awareness and private sector role remain low.

The disaster risk management strategy must address the multifaceted vulnerabilities of Hala City arising from its flat alluvial plains, fertile loamy soils, and close dependence on Indus-fed agriculture, which increase exposure to riverine flooding, waterlogging, irrigation-related hazards, and climate variability that can disrupt agricultural productivity, livelihoods, and essential infrastructure. Priorities include: (i) strengthening flood resilience through improved drainage, embankments, and early warning systems in high-risk zones (ii) enhancing water quality monitoring and contamination control to prevent disease outbreaks in vulnerable communities; (iii) mitigating industrial disaster risks via strict enforcement of safety regulations and emergency preparedness; (iv) managing air and noise pollution to safeguard public health; and (v) implementing comprehensive waste management to counter the growing solid and hazardous waste crisis. The integrated approach will reduce disaster impact, protect livelihoods, and improve overall safety and sustainability for the region's population.

11.13 Policy Guidelines[61]

- Arrange and conduct need assessments of damages / losses.
- Ensure application of proper mechanism for evacuation and relocation of affected community to safer places.
- Establish Relief Camps with necessary arrangements.
- Initiate relief and rescue activities in their respective areas with the help of all stakeholders which also include provision of shelter, food, medicines etc. to the affected communities as well as to IDPs who are settled in makeshift Relief camps
- Arrange coordination meetings with health units.
- Mobilize entire health network functioning in the district for situation analysis and need assessments.
- Arrange mobile teams / Mobile Medicine Units for pre-medication of affected communities in all near and remote areas.
- Delegate responsibilities for regular inspection and maintenance of irrigation channels and drains.
- Coordinate and communicate with DDMA.
- Identify and strengthen the vulnerable points in the banks of all canals and drains running through the district.

11.14 Strategic Development Plan

The aim of the policy is to advocate an approach to disaster management that focuses on reducing risks the probability of losing one's life or health, assets and livelihoods.
Some of the objectives in this aspect includes;

I. Long Term Plan

- Establish coordination mechanism with PMD for real-time flood discharge forecasts.
- Regulate water discharge into canals, distributaries, and drains before monsoon season.
- Monitor embankments and vulnerable sections of irrigation channels (IPs/NIPs) with inspection teams.
- Ensure medical facilities and emergency supplies are available at relief camps.
- Strengthen coordination and communication channels with DDMA and allied departments.
- Empower the District Health Officer (DHO) to declare health emergencies and mobilize resources during disasters.
- Deploy medical and paramedical staff at key locations requiring health coverage.

[3] https://www.ndma.gov.pk/public/storage/publications/July2024/uJlDaTd4UluJgi5QUJgP.pdf

- Develop stormwater drainage action plan in Hala and Matiari towns to clear existing drains, install dewatering pumps in low-lying areas, and maintain catchment outlets before monsoon season.
- Improve public safety readiness through surveillance, early warning alerts, and coordination with police/local administration for crowded places.

II. Short Term Plan

- Expand the role of DSM and PPHI to provide sustainable health cover to disaster-affected populations, particularly IDPs in BHU catchment areas.
- Conduct national and district-level risk assessments to identify highly vulnerable areas and design targeted disaster risk reduction interventions.
- Mainstream DRR into development planning by addressing root causes of vulnerability, improving infrastructure, and integrating risk-informed decision making.
- Empower and involve local-level actors (UCs, municipal committees, CBOs) in disaster planning and response to ensure sustainability.
- Clarify roles and responsibilities of institutions at all levels (federal, provincial, district, taluka, municipal, union councils) within an updated, multi-hazard national response plan aligned with current legislation.
- Invest in resilient stormwater drainage networks, including integrated urban drainage master plans, flood retention ponds, and climate-resilient road and rail infrastructure.
- Enhance public safety and security resilience by developing layered security systems (CCTV, patrols, vehicle barriers), conducting regular drills at crowded places (schools, markets, hospitals, shrines, bus/railway stations), and building partnerships between government, communities, and private operators.
- Strengthen institutional capacity for multi-hazard management by investing in equipment, training, and coordination platforms across sectors.

Disaster risk management initiatives will be integrated with municipal infrastructure planning, emphasizing flood control through improved drainage, embankment maintenance, and water discharge regulation. Coordination with health services, emergency response, and local authorities will ensure timely evacuation, relief, and medical support. Public awareness, hazard mapping, and stakeholder engagement will strengthen community resilience. This integrated approach will minimize disaster impact, enhance recovery capacity, and maintain essential services during emergencies, fostering long-term safety and sustainability for vulnerable populations.

11.15 Priority Projects

- **Provision for Emergency Shelter and Disaster Resilience Hub**

The devastating floods of 2010, 2011, 2022, and now 2025 have highlighted the growing frequency and severity of such disasters, with climate change further intensifying their impact. These recurring events underscore the urgent need for a designated emergency shelter site.

Hala City is classified under moderate to high disaster severity, frequently experiencing urban flooding, along with widespread damage to crops, housing, and infrastructure. These recurring emergencies disrupt livelihoods, particularly in low-laying and agricultural areas, and often result in the displacement of vulnerable populations.

At present, there is no dedicated emergency shelter infrastructure available to house affected families during such crises. This lack of preparedness increases the risk to human life, overwhelms, local services, and delays recovery efforts following a disaster.

To fill this critical gap, a 69-acre emergency shelter site has been proposed in Hala City. The shelter hub will serve as a safe, temporary refuge for displaced individuals, while also enabling the city to respond more effectively to future disasters. It will play a vital role in protecting lives, supporting recovery, and reducing pressure on local institutions during emergency situations.

The project will follow a phased development model, with initial construction focused on a portion of the site to address immediate humanitarian needs. Guided by the Sphere Handbook (2018)[62] and UNHCR Settlement Planning Standards, which recommend approximately 45 m² per person for planned settlements[63], the full site has the capacity to accommodate around 6,200 people.

The first phase of development will prioritize

- Emergency shelters
- Washrooms and sanitation facilities
- Storage and distribution areas
- Boundary walls and controlled access
- Administrative units for coordination and registration
- Energy-efficient lighting, fire points, and evacuation routes
- PWD-compliant infrastructure for accessibility

The facilities will be developed in line with the NDMA Pakistan minimum Standards of Relief in Camps (2024)[64] to ensure safe, dignified, and well-managed emergency shelter operations.

The phased, scalable approach allows for flexibility and responsiveness in future emergencies, ensuring Hala City is better prepared to manage displacement, safeguard livelihoods, and reduce the long-term

[62] The Sphere Handbook: Humanitarian Charter and Minimum Standards in Humanitarian Response (Fourth Edition)
[63] Principles & Standards for Settlement Planning | UNHCR
[64] https://www.ndma.gov.pk/public/storage/publications/July2024/uJlDaTd4UluJgi5QUJgP.pdf

impacts of disasters. Ultimately, this project will strengthen the city's resilience and enhance the capacity of local authorities to provide timely and effective disaster relief, without disrupting day-to-day urban life.

- **Scope**

- **Planning & Feasibility**
  - Conducting a feasibility study to confirm land suitability, elevation, access, and flood resilience
  - Finalizing master plan layout and phased development strategy
- **Site Development**
  - Boundary wall construction and controlled entry/exit points
  - Provision of essential camp infrastructure including internal pathways and drainage
- **Emergency Response Facilities**
  - Temporary shelters, washrooms, and sanitation units meeting Sphere standards
  - Storage areas for food, medicines, and relief supplies
  - Administration block for DDMA operations and coordination
  - Energy-efficient solar lighting, fire points, emergency access routes
  - Dedicated spaces for medical triage and vulnerable groups (PWD, elderly, women & Children
- **Disaster Resilience Features**
  - Flexible modular design allowing rapid expansion in crisis conditions
  - Compliance with NDMA Pakistan Standards for safety, health, and minimum camp services
  - Integration of risk-informed planning to ensure long-term functionality and sustainability

- **Size**

The program will target the development of 69-acre flood-resilient site, planned to accommodate up to 6,200 people (based on Sphere and UNHCR standard of 45 m2 per person), with the initial phase developing 20-25 acres capable of serving approximately 2,000 people while preserving the remaining land for future expansion and essential support facilities.

- **SDG'S Alignment**

I. **GOAL 2 – Zero Hunger**

The project will support food security for affected communities by protecting livelihoods and minimizing crop and livestock losses, aligning with SDG 2.3, which aims to improve agricultural productivity and resilience.

II. **GOAL 3 – Good Health and well-Being**

Construction and operation of emergency shelters will provide safe refuge, reduce health risks, and improve well-being during disasters, contributing to SDG 3.8 and 3.d, which focus on ensuring healthy lives and strengthening disaster risk management.

III. **GOAL 6 – Clean Water and Sanitation**

By improving access to clean water and sanitation facilities within shelters, the project contributes to SDG 6.1, ensuring availability and sustainable management of water and sanitation for all.

IV. GOAL 7 – Affordable and clean energy

The shelters will incorporate energy-efficient solutions to provide reliable power during emergencies, supporting SDG 7.1, which aims to ensure access to affordable, reliable and sustainable energy.

V. Goal 8 – Decent Work and Economic Growth

By creating jobs in construction, facility management, and emergency response, the project contributes to SDG 8.3 and 8.5, promoting productive employment and inclusive economic growth.

VI. GOAL 11 – Make cities and human settlements inclusive, safe, resilient and sustainable

By establishing organized, safe, and resilient emergency infrastructure, the project supports SDG 11.5 and 11.b, which focus on reducing disaster impacts and building inclusive, resilient cities.

- **Implementing Authority:**

District Disaster Management Authority (DDMA), Municipal Committee Hala.

- **Preliminary Cost Estimate**

Estimated Cost: 250 million Approx.

S. No.	Project Name	Estimated Cost In Millions	ADP	Non ADP	Status	
					Short Term	Long Term
Disaster Management Project						
1	Feasibility study for Emergency Shelter and Disaster Resilience Hub	50	-	Non ADP	**Short Term**	-
2	Procurement for additional land for Emergency Shelter and Disaster Resilience Hub	200	-	Non ADP	**Short Term**	-

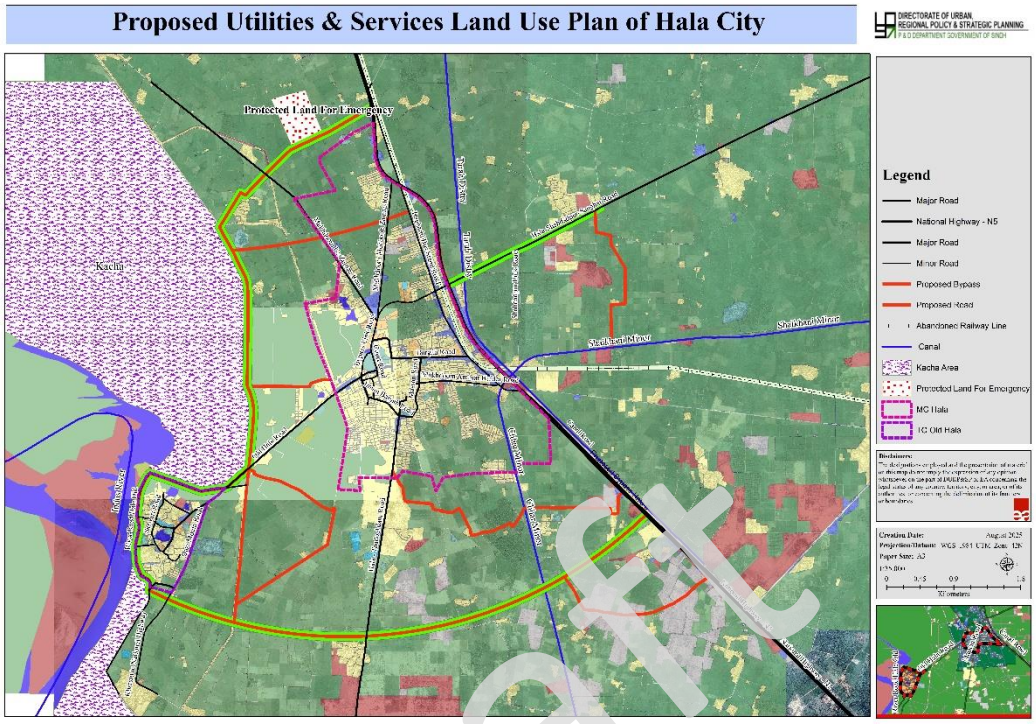
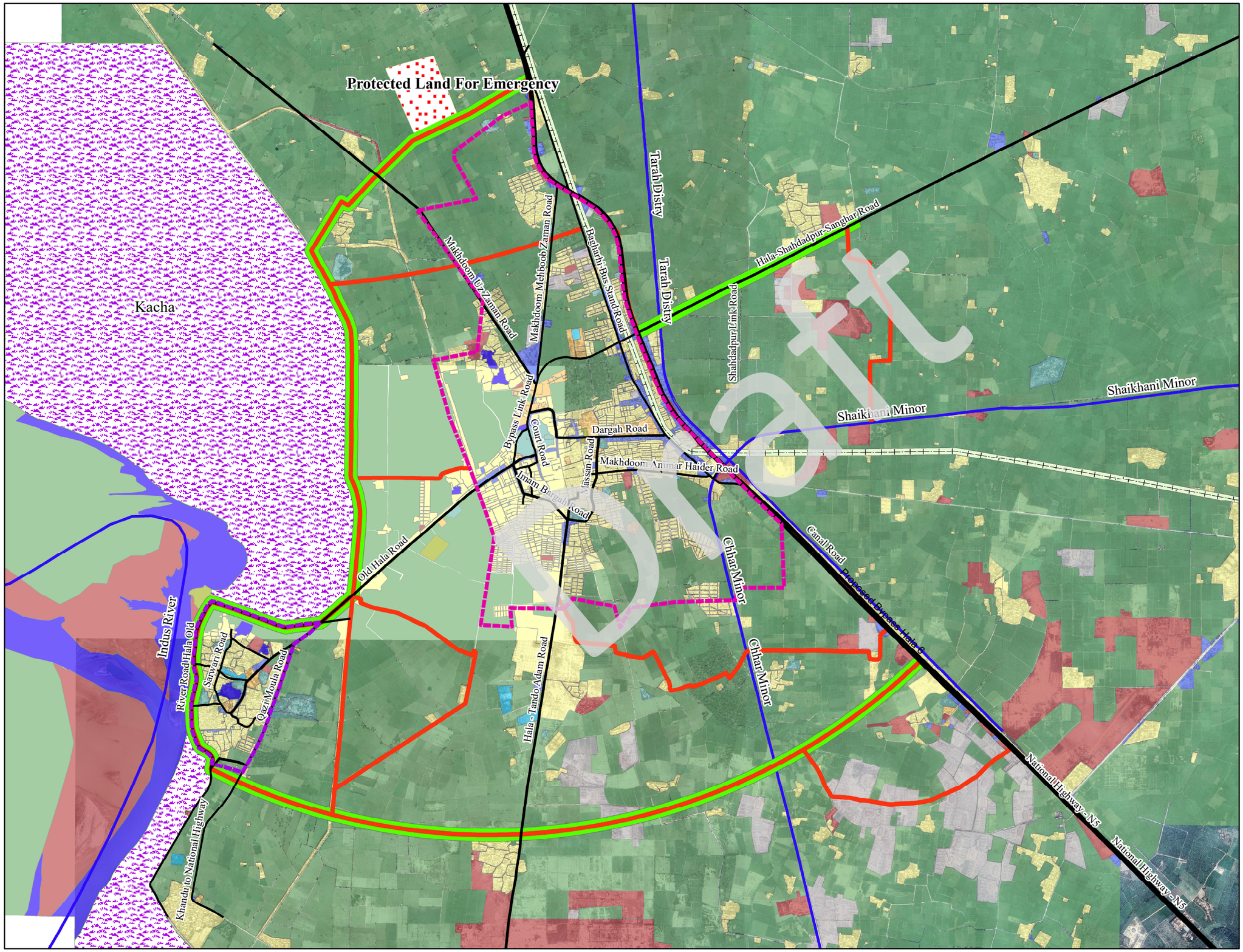


Figure 11-5: Proposed Emergency Land use for Hala City

Proposed Utilities & Services Land Use Plan of Hala City

DIRECTORATE OF URBAN, REGIONAL POLICY & STRATEGIC PLANNING
P & D DEPARTMENT GOVERNMENT OF SINDH



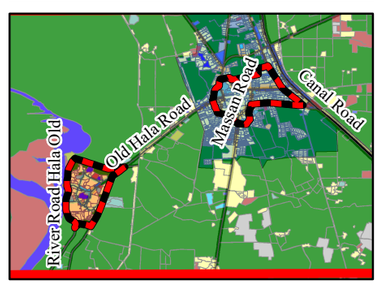
Legend

- Major Road
- National Highway - N5
- Major Road
- Minor Road
- Proposed Bypass
- Proposed Road
- Abandoned Railway Line
- Canal
- Kacha Area
- Protected Land For Emergency
- MC Hala
- TC Old Hala

Disclaimers:
The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of DURP&SP or EA concerning the legal status of any country, territory, city, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Creation Date: August 2025
Projection/Datum: WGS_1984_UTM_Zone_42N
Paper Size: A3
1:35,000

0 0.45 0.9 1.8
Kilometers



12. CLIMATE CHANGE EMERGENCY CONTINGENCY PLAN

Climate change has become an urgent global concern, posing serious threats to both natural ecosystems and human societies Sindh being no exception. Characterized by long-term changes in temperature and precipitation patterns, climate change is already disrupting the environmental equilibrium and socio-economic structure of the province. The increasing frequency and severity of extreme weather events such as floods, droughts, heatwaves, rising sea levels, and erratic rainfall are clear indicators of this shift.

Scientific evidence points to human activities, particularly greenhouse gas emissions since the Industrial Revolution, as the primary drivers of climate change. In Sindh, rising temperatures are accelerating glacier melt in the northern regions, leading to unpredictable river flows. While this may temporarily boost water availability, it is expected to result in long-term freshwater shortages, further aggravating the existing water crisis in many communities.

Rising sea levels, projected to increase by 18 to 36 cm under low-emission scenarios and up to 59 cm under high-emission scenarios, pose a significant threat to coastal regions of Sindh, including major urban centers such as Karachi, Thatta, and Badin. These areas are increasingly vulnerable to coastal erosion, saltwater intrusion into freshwater supplies, and the displacement of local populations.

Sindh, the second-largest province of Pakistan, features a remarkably diverse geographical landscape. It includes deserts, wetlands, riverine and mangrove forests, mountainous and hilly regions, fertile agricultural lands, and an extensive coastline. This diverse terrain makes the province particularly susceptible to the wide-ranging impacts of climate change, as evidenced by the increasing frequency and intensity of natural disasters.

Shifting rainfall patterns are expected to bring more intense and frequent downpours from the mid-21st century onward. These changes threaten to worsen urban flooding in cities and disrupt agriculture, a key pillar of Sindh's economy.

> *With the evolving world, the words like global warming, greenhouse effect, CO_2 emission & carbon footprint, relentless use of fossil fuel, rising sea temperature resulting in rising sea levels, heatwaves, glaciers melt down at a faster pace resulting in GLOF (Glacial Lake Outburst Floods), unprecedented and extreme weather conditions, floods and droughts, to name a few, are no more new to us. It's high time now that we should acknowledge these issues to find a way out.*
>
> Source: Sindh Climate Change Policy 2022

As climate change affects both industrialized and developing regions worldwide, Sindh must take proactive steps to address these challenges. The government must mainstream climate adaptation and mitigation strategies into the province's medium- and long-term development plans.

To this end, the Sindh Climate Change Policy 2022, developed by the Environment, Climate Change and Coastal Development Department's Directorate of Climate Change, offers a strategic framework for sustainable socio-economic development. The policy seeks to integrate climate resilience across all sectors, enhance the quality of life for Sindh's residents, and ensure that the province fulfills its international obligations, including those under the Paris Agreement.

12.1 Climate Trends and Projections – Key Components

➢ Historical Climate Trends

An analysis of temperature data from 2010 to 2022 reveals distinct seasonal patterns in Hala, characterized by hot summers and mild winters. Maximum temperatures typically peak around 45°C during May and June, while minimum temperatures fall close to 10°C in December and January. Although the seasonal variation has remained relatively stable, there is a noticeable upward trend in both peak and average temperatures after 2015. This gradual warming trend may be indicative of broader climate change impacts.

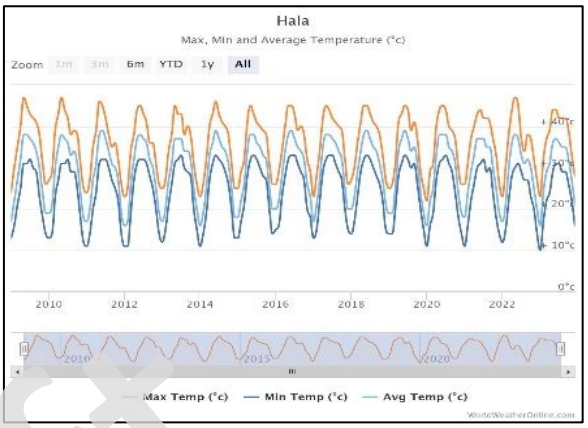


Figure 12-1: Max, Min Average Temperature

The implications of rising temperatures are significant: increased evaporation rates and water demand, heightened public health risks such as heatstroke, alterations in agricultural cycles, and a pressing need for climate-resilient urban infrastructure.

In terms of precipitation, the period from 2010 to 2022 was marked by variability, with an exceptional spike in rainfall observed in 2022. Although previous years recorded up to 170 mm of rain, the intensity and irregularity of recent rainfall patterns suggest an increased likelihood of extreme precipitation events in the future—attributable to changing climate dynamics.

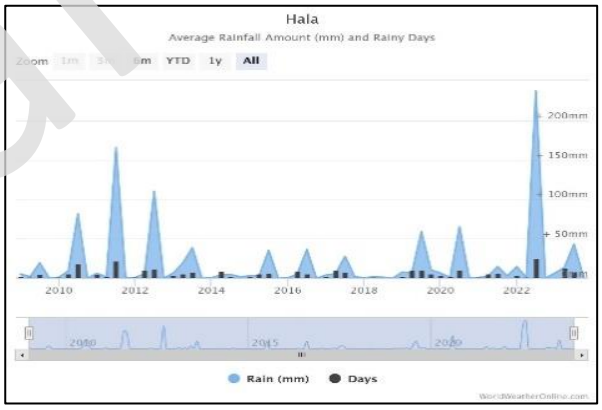


Figure 12-2: Average Rainfall

12.2 Expected Precipitation in next 30 years[65]

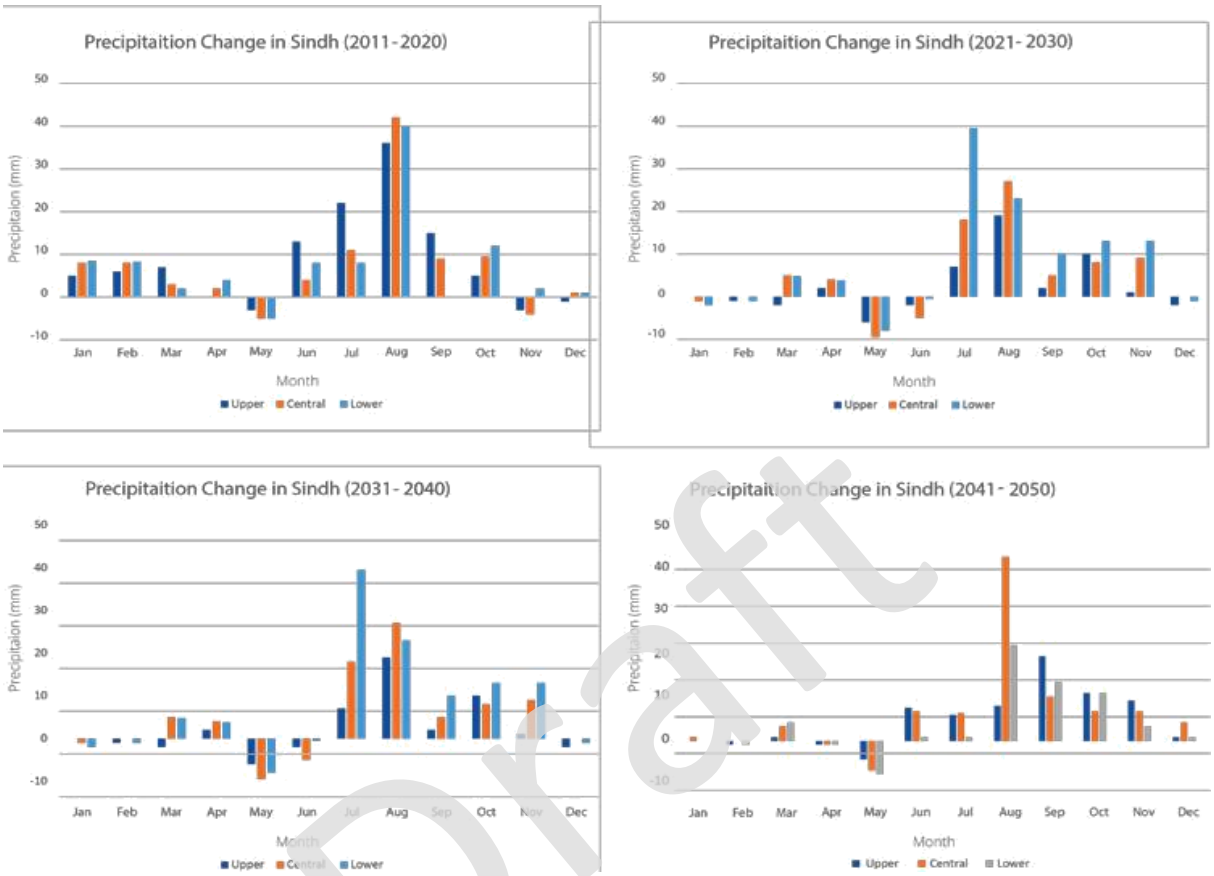


Figure 12-3: Precipitation Change in Sindh

The image contains four climate-related bar charts showing rainfall projections across different districts in Sindh, particularly for the years 2021 to 2050.

July–August Rainfall Spikes

The graphs for Hyderabad and Nawabshah show sharp increases in rainfall during July and August in projected periods compared to the historical baseline. This suggests greater monsoonal intensity in the coming decades.

Shifts in Rainfall Patterns

some months that traditionally receive low rainfall (e.g., March, October) show moderate increases in future projections. This may lead to off-season rainfall, disrupting existing agricultural calendars.

[65] Sindh Climate Change Policy 2022

Impacts on Hala (Central Sindh):

- Hala, situated between Hyderabad and Nawabshah, is likely to experience similar increases in rainfall intensity.
- This trend implies greater risk of flash flooding, waterlogging, and urban drainage stress, especially in July–August.
- Agricultural disruption is also likely due to both delayed onset and extended duration of the monsoon.

Key Effects:

Flood Risk: The projected intense rainfall spikes in July and August, particularly under RCP8.5, pose a serious flood risk to Hala and surrounding areas.

With flat terrain and historically poor drainage systems, even moderate increases in rainfall can lead to waterlogging, urban flooding, and riverine floods.

Impact on Agriculture: Central Sindh is a major agricultural belt. Increased rainfall variability can severely affect sowing and harvesting cycles, particularly for crops like cotton, rice, and sugarcane. Unseasonal rains in September–October can damage mature crops and post-harvest storage, leading to economic losses.

Water Management Challenges: Erratic rainfall patterns will strain existing irrigation infrastructure. Periods of excess will demand efficient drainage, while dry months (e.g., March–June) will require water conservation and storage strategies.

Urban Stress and Health Risks: Hala's urban infrastructure may struggle to cope with flash floods and stagnant water, increasing the risk of waterborne diseases such as cholera, dengue, and malaria.

12.3 Extreme Weather Events

Frequency and intensity of riverine floods, heavy flood, epidemics, earth quake or wildfires are given below in Table 3-1.

Table 12-1: Hazards Matrix of Matiari[66]

Hazard	Frequency	Severity / Force	Year
Riverine floods	Monsoon	Medium	2010, 2011, 2022
Heavy Rains	Monsoon	High	2011, 2012, 2022
Epidemics	Seasonal	Low	Every Year
Earth quake	Rare	Low	2013

The available data clearly highlights that Hala and the wider Matiari District have been increasingly vulnerable to severe flash floods, resulting in widespread destruction and long-term challenges. The most significant impacts of these floods include:

- Displacement: Thousands of residents were forced to leave their homes as floodwaters inundated villages and low-lying areas.
- Crop Destruction: Large areas of agricultural land, particularly those cultivating cotton, sugarcane, and vegetables, were completely wiped out.
- Infrastructure Damage: Essential infrastructure, including roads leading to Hala, was severely damaged or washed away. Power supply and communication networks were also disrupted.
- Urban Flooding: Streets in Hala city were submerged, with floodwater entering homes, shops, and public buildings, causing significant property loss.
- Public Health Crisis: The accumulation of stagnant water created breeding grounds for disease, leading to outbreaks of dengue, diarrhea, and various skin infections.
- School Closures: Many government schools were either shut down or converted into temporary shelters, affecting children's education.

Table 12-2: Comparative Overview of 2010 and 2022 Floods in Sindh

Indicator	2010 Flood[67]	2022 Flood[68]
Total Affected Districts	17	24
People Died	411	1,093
People Injured	1,235	8,422
Houses Damaged	879,978	2,087,186

[66] Provincial Disaster Profile - PDMA SINDH

[67] Annual Flood Report 2010 of Ministry of Water & Power, GoP

[68] Flood 2022 in Sindh by PDMA, GoS

Roads Damaged (km)	8,467	8,463
Cropped Area Affected (ha)	1,043,500	3,777,272

A comparison of the 2010 and 2022 flood events in Sindh clearly illustrates the escalating severity of climate-induced disasters. In 2022, not only did the number of affected districts increase to 24 from 17, but human casualties also surged—with over 1,000 deaths and more than 8,000 injuries. Housing damage more than doubled, affecting over 2 million homes compared to under 900,000 in 2010.

Interestingly, while road damage remained relatively constant at around 8,460 kilometers, the scale of agricultural devastation was far greater in 2022, with nearly 3.8 million hectares of cropped area affected—almost four times that of 2010. This has serious implications for food security, rural livelihoods, and economic stability.

Table 12-3: Impacts of 2022 Flood on Matiari[69]	
Human Deaths	16
Animal Deaths	6,788
Population Affected	250,000
Displaced Population	51,000
Full House Damaged	26,662
Crops Damaged (Acres)	140,833

Matiari District, although not one of the hardest-hit areas, was notably impacted by the 2022 monsoon floods. The Sindh government declared 24 districts, including Matiari, as disaster-stricken due to severe flooding and rainfall. These findings underscore the urgent need for comprehensive disaster risk reduction measures and long-term investments in climate resilience, particularly in vulnerable districts like Matiari.

12.4 Governance and institutional framework

To tackle the challenges posed by climate change, Pakistan has implemented various adaptation measures at both the national and provincial levels.

Climate change is a global issue and poses significant challenges for thinkers, planners, policymakers, and professionals worldwide. It is expected to affect nearly every sector of Pakistan's economy. The Ministry of Climate Change (MoCC) is the primary institution responsible for climate change in Pakistan. It was established following the 18th constitutional amendment in 2010, which resulted in the dissolution of the Ministry of Environment due to the devolution of powers to provincial governments. While environmental matters now fall under provincial jurisdictions, climate change remains a federal issue, as it requires a national response and representation in international climate negotiations.

[69] Flood 2022 in Sindh by PDMA, GoS

In recent years, Pakistan has taken several policy and planning initiatives related to climate change, outlined as follows:

12.5 National Level Actions

Category	Details
Institutional Evolution	- 2010: Ministry of Climate Change (MoCC) formed after constitutional amendment. - Environment is a provincial matter; climate change remains federal.
Legislation	-1983: Pakistan Environmental Protection Ordinance. -1997: Pakistan Environmental Protection Act.
Research & Institutions	- 2003: Global Change Impact Studies Centre (GCISC) established. - 2005: Environmental Policy Framework based on 1997 Act.
Climate Change Policy	- 2008: Task Force on Climate Change by Planning Commission. - 2012: National Climate Change Policy (NCCP) launched. - 2013: NCCP Implementation Framework.
International Commitments	- 2007: Bali Action Plan – NAMAs introduced. -2015: INDC submitted for COP21. - 2021: Updated NDC—50% emissions reduction by 2030 (with support).
Key Developments	- 2017: National Climate Change Act passed. - Green Climate Fund: USD 249M adaptation/mitigation projects. -2023: National Clean Air Policy. -Vision 2025: Low-carbon economy. - 2014: Billion Tree Tsunami restored 350,000 ha land.

12.6 Provincial Level Actions (Sindh)

Category	Details
Directorate General of Climate Change (DoCC)	-Established: 2022. - Operational: March 2022. - Liaison between federal government, international bodies, and provincial departments.
Environment, Climate Change & Coastal Development Department	- Formed in 2016 to manage climate, environment, and coastal issues.
Sindh Environmental Protection Agency (SEPA)	- Ensures environmental and public health safety. - Conducts research on pollutants and regulates their use.
Sindh Environmental Protection Act (2014)	- Passed in 2014. - Legal framework for pollution control, environmental protection, and sustainability.
Sindh Climate Change Policy (2022)	- First official climate policy by DoCC. - Notified on July 7, 2022.

Category	Details
Sindh Provincial Action Plan for Climate Change (2018)	- Promotes renewable energy (solar, wind). - Integrated disaster risk management. - Health adaptation (heat, water-related diseases).

12.7 Institutional response and resilience initiatives in sindh

To tackle the growing climate and disaster risks, several key initiatives have been undertaken by the Government of Sindh. The Sindh Resilience Reduction Unit (RRU), operating under the Planning & Development Department (P&DD), is a pivotal body in mainstreaming Disaster Risk Reduction (DRR) and climate resilience into provincial planning. RRU coordinates with government entities, development partners, and humanitarian agencies to promote resilient infrastructure, inclusive development, and the integration of DRR and climate change adaptation (CCA) into sectoral plans. It also supports the Sindh Resilience Strategy and DRR integration into Annual Development Plans (ADPs), working closely with PDMA Sindh, UN agencies, the World Bank, ADB, and various NGOs.

In response to the 2022 floods, the **Sindh People's Housing for Flood Affectees (SPHF)** was established to lead the Sindh Flood Emergency Housing Reconstruction Project (SFEHRP). With a target of building 2.1 million disaster-resilient houses by June 2025, this $1.5 billion initiative emphasizes inclusive recovery by granting housing ownership rights to women. SPHF utilizes a public-private partnership model and digital systems for transparent beneficiary management. As of early 2025, more than 200,000 homes have been completed, with 700,000 under construction. It also partners with local NGOs to ensure that housing solutions are sustainable and culturally appropriate.

> Climate resilience is defined as the capacity for a socio-ecological system to: (1) absorb stresses and maintain function in the face of external stresses imposed upon it by climate change and (2) adapt, reorganize, and evolve into more desirable configurations that improve sustainability of the system, leaving it better prepared for future climate change impacts. "Resilience: The emergence of a perspective for social-ecological systems analyses". Global Environmental Change. 16: 253–267.)

Moreover, the **Sindh Flood Emergency Rehabilitation Project (SFERP)**, financed by the World Bank and managed by the P&DD, aims to rebuild critical infrastructure, restore livelihoods, and enhance climate preparedness. The project focuses on repairing flood control systems, roads, and water supply schemes, while also expanding emergency response services such as SERS 1122. In addition to livelihood support and livestock assistance, SFERP emphasizes a “build back better” approach and incorporates gender-sensitive training on GBV, SEA, and child protection. A strong grievance redress mechanism further ensures that affected communities have access to timely support and feedback channels.

12.8 Action Plans

Infrastructure and the built environment are among the most vulnerable sectors in Hala and its Matiari district when it comes to the potential impacts of climate change-related disasters. Strengthening and securing infrastructure is essential—not only to minimize the risk of human casualties but also to enhance the capacity of local communities to reduce the broader damaging effects of climate change.

While urban areas do face risks, rural and remote settlements are equally, if not more, prone to the effects of natural disasters. The increasing frequency of extreme weather events—such as unseasonal torrential rains, riverine and flash floods, and heatwaves—pose significant threats to both urban and rural infrastructure. This includes transportation and communication networks, electricity grids, irrigation systems, water supply and sanitation facilities, as well as public and private buildings such as homes, schools, hospitals, religious sites, animal shelters, markets, and guest houses.

To protect Matiari's built environment, there is an urgent need to adopt climate-resilient infrastructure development as a priority. This involves revising or developing building regulations and construction codes to ensure structures can withstand future climate impacts. Comprehensive hazard mapping and zoning across the district are essential to guide safe construction and land-use planning. Additionally, there is a pressing need to raise awareness and promote the adoption of climate-resilient construction practices among builders, communities, and local authorities.

Proposed Urban Resilience Action Plan for Matiari District are given below:

12.9 Institutional Strengthening & Governance

#	Initiative/Actions	Aspect	Responsibility	Time Frame
01	**Establish a District Climate Resilience Task Force**	Adaptation	Deputy Commissioner	**Short Term**
	A dedicated multi-sectoral body under the Deputy Commissioner to coordinate planning, implementation, and monitoring of all climate resilience activities.			
02	**Integrate Climate Adaptation into District Development Plans**	Adaptation	Deputy Commissioner	**Short Term**
	Ensure that all major urban development, agriculture, infrastructure, health, and education initiatives include climate risk assessments and mitigation strategies.			
03	**Decentralize Climate Decision-Making**	Adaptation	Deputy Commissioner	**Short Term**
	Empower Union Councils with localized adaptation planning and emergency response training			
04	**Integration with Sindh Policies**	Adaptation	Deputy Commissioner	**Short Term**
	Align the plan with Sindh's Climate Change Policy, DRR frameworks, and agriculture strategies			

12.10 Climate-Smart Infrastructure Policy

#	Initiative/Actions	Aspect	Responsibility	Time Frame
01	**Adopt & Enforce Climate-Resilient Building Codes**	Adaptation	SBCA	**Short Term**
	• Mandate heat-resilient and flood-safe designs for new public buildings, schools, clinics, and housing schemes—especially in flood-prone zones. • Enforce zoning regulations that restrict dense construction in low-lying flood-prone areas.			
02	**Climate-Proof Roads & Utilities**	Adaptation	District Administration	**Short Term**
	Allocate funds and update design standards for roads, bridges, and electrical infrastructure using climate-resilient materials and drainage systems.			

12.11 Climate Zoning and Risk-Based Land Use Planning

#	Initiative/Actions	Aspect	Responsibility	Time Frame
01	**Define climate-sensitive zones for targeted planning**	Adaptation	District Administration and PDMA	**Short Term**
	• Develop zoning maps indicating flood-prone, heat-prone, and safe zones. • Allocate land use based on risk: restrict development in high-risk zones, promote green areas in heat-prone zones, etc. • Propose zoning codes and building regulations tailored to each climate zone.			

12.12 Extend Drainage Infrastructure

#	Initiative/Actions	Aspect	Responsibility	Time Frame
01	**Topographic and Hydrological Mapping**	Adaptation	District Administration and PDMA	**Short Term**
	Conduct detailed elevation surveys and watershed mapping using GIS and DEM to identify natural drainage pathways and low-lying accumulation zones.			
02	**Feasibility Studies for Drainage Networks**	Adaptation	Local Government and PHED	**Short Term**
	Undertake technical and socio-economic feasibility studies for both large-scale and community-based drainage systems, considering climate projections and land use.			
03	**Design and Construction of Surface Drains**	Adaptation	Local Government and PHED	**Short Term/Medium Term**
	Develop and construct open surface drains (lined/unlined) in waterlogged zones, ensuring connectivity to existing natural outfalls or ponds.			
04	**Drain Rehabilitation and Desilting**	Adaptation	Local Government and PHED	**Short Term**

#	Initiative/Actions	Aspect	Responsibility	Time Frame
	Rehabilitate blocked or encroached drains through desilting, reshaping, and enforcement of no-construction zones along drainage corridors.			
05	**Community Drainage Management Committees**	Adaptation	Local Government and PHED	**Short Term**
	Establish local user groups or water drainage committees to manage, monitor, and maintain drainage systems in partnership with local government.			
06	**Integration with Road and Urban Infrastructure**	Adaptation	Local Government and PHED	**Short Term**
	Align drainage planning with road, housing, and public facility development to ensure all new construction includes integrated stormwater management.			

12.13 Flood Risk Management & Drainage Planning

#	Initiative/Actions	Aspect	Responsibility	Time Frame
01	**Low-Lying Areas (North & East)**	Adaptation	Local Government and PHED	**Short Term**
	• Construct engineered drainage channels to direct runoff safely to natural waterways. • Develop retention ponds and constructed wetlands to manage excess rainwater and recharge groundwater. • Install non-return valves in sewer outlets to prevent backflow during flooding. • Elevate critical infrastructure (pumping stations, hospitals, schools) slightly above base flood elevations.			
02	**Strengthen Embankments & Bunds**	Adaptation	Irrigation Dept.	**Short Term**
	Reinforce and regularly maintain river embankments and canal bunds to reduce breach risk.			
03	**Abandoned Railway Line Redevelopment**	Adaptation	Local Government and PHED	**Long Term**
	• Convert into a storm water corridor or linear park with dual purpose: water conveyance and public recreation. • Include permeable pavements and green strips to enhance infiltration and reduce surface runoff.			
04	**Infrastructure Elevation**	Adaptation	Local Government and PHED	**Short Term**
	• Install water tanks and pumping equipment on raised platforms, especially in low-lying neighborhoods. • Use solar-powered pumps for reliability during outages caused by flooding.			
05	**Water Quality Management**	Adaptation	Local Government and PHED	**Short Term**
	Monitor water quality before and after flood events via mobile testing units			
06	**Sanitation and Wastewater Management**	Adaptation	Local Government and PHED	**Short Term**

#	Initiative/Actions	Aspect	Responsibility	Time Frame
	• Retrofit existing drains with graded slopes based on the digital elevation model to ensure efficient outflow. • Regularly de-silt and maintain storm drains, especially those in eastern and northern Hala.			
07	**Community Engagement & Early Warning**	Adaptation	PDMA and Deputy Commissioner	**Short Term**
	• Train local communities in flood preparedness, water conservation, and emergency response. • Train communities in evacuation procedures, first aid, and emergency response protocols. • Form neighborhood WASH and resilience committees to monitor drainage and sanitation. • Integrate DEM data with GIS-based urban planning tools for real-time water and terrain monitoring.			

12.14 Water Resource Management

#	Initiative/Actions	Aspect	Responsibility	Time Frame
01	**Adopt & Enforce Climate-Resilient Building Codes**	Adaptation	PHED	**Short Term**
	Introduce a permit and monitoring system for tube wells to control over-extraction and incentivize efficient irrigation methods.			
02	**District Water Resource Master Plan**	Adaptation	PHED	**Long Term**
	Prepare a long-term strategy addressing surface water use, groundwater recharge, water harvesting, and drought management.			
03	**Water Pricing & Revenue Reform**	Adaptation	Municipal Committee	**Short Term to Medium Term**
	Introduce Tiered Water Tariffs and Meter-Based Billing Policy			
04	**Mandate Water-Saving Infrastructure in Urban Planning**	Adaptation	SBCA and Municipal Committee	**Short Term**
	Update municipal bylaws to require: • Rainwater harvesting in all new buildings. • Greywater reuse for parks and non-potable usage.			
05	**Public-Private Partnerships (PPP) for Water Services**	Adaptation	Municipal Committee	**Short Term**
	Enable PPPs for: • Meter supply and maintenance. • Wastewater treatment & reuse. • Awareness campaigns and leak detection systems.			

12.15 Resilient Agriculture & Livelihoods

#	Initiative/Actions	Aspect	Responsibility	Time Frame
01	**Establish a Climate-Smart Agriculture Policy**	Adaptation	Agriculture Dept.	**Short Term**
	• Promote Climate Resilient Crops Support the adoption of drought- and flood-tolerant seed varieties and climate-smart cropping calendars. • Expand Agro-Advisory Services Deliver real-time weather and crop guidance through mobile SMS, radio, and extension workers. • Enhance Livestock Resilience Provide preventive vaccinations, establish fodder banks, and deploy mobile veterinary clinics during climate events. • Rehabilitate Irrigation Infrastructure Rebuild and climate-proof canals, watercourses, and tube wells to ensure reliable irrigation. • Introduce and scale up drip irrigation and water-conserving techniques among farmers. • Regulate Agrochemical Use • Introduce farmer training on integrated pest management and limit overuse of harmful chemicals to prevent groundwater contamination.			

12.16 Energy System Resilience

#	Initiative/Actions	Aspect	Responsibility	Time Frame
01	**Green Corridors & Urban Foresting**	Mitigation	Municipal Committee	**Short Term**
	Develop green belts along main roads and establish mini urban forests in towns like Hala, Matiari, and Saeedabad using native drought-resistant trees.			
02	**Rooftop & Vertical Gardens**	Adaptation	SBCA	**Short Term**
	Incentivize households and commercial buildings to develop rooftop or vertical gardens to reduce surface heat and improve air quality.			
03	**Solar Energy for Public Services**	Mitigation	Energy Dept.	**Short Term**
	Install solar panels on key public buildings and streetlights to reduce load on the local grid and ensure essential services remain functional during power cuts			
04	**Energy Efficiency Awareness**	Adaptation	Municipal Committee	**Short Term**
	Community campaigns on reducing power usage and energy-efficient appliances can help mitigate overload.			

13. SUSTAINABLE DEVELOPMENT GOALS

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries - developed and developing - in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth all while tackling climate change and working to preserve our oceans and forests.[70]

13.1 Sustainable Development Goals (SDGs) National Framework

The Planning Commission of Pakistan with the support of the United Nations Development Programme (UNDP) has developed a national framework for the SDGs after extensive deliberation and consultation with stakeholders at provincial and divisional levels.[71] In this framework, existence of strong interlinked, and progress on certain targets depend on achievement of others. Under the framework, baseline for 17 goals, 169 targets and 242 indicators were prepared and prioritized according to short-term, medium-term and long-term perspectives to yield better results in efficient and timely manner. In view of resource constraints and institutional capacities, the national targets for these goals have been set lower than global level following a more pragmatic approach.

13.2 Government of Sindh Vision[72]

Government of Sindh has spearheaded efforts to support the mainstreaming, localization, and implementation of the 2030 Agenda through a support project for SDGs implementation in Sindh, jointly funded by the Government of Sindh and United Nations Development Programme (UNDP), with the aim to address socio-economic challenges in the province and steer it in a progressive direction towards achievement of SDGs. Under the project, a SDGs Support Unit has been established in Planning & Development Board, with effect from May 2017. The Unit works in coordination with the National SDGs Unit, which has been established in the Ministry of Planning, Development and Reform as well as Federal and Provincial Parliamentary Task Forces, Core-Group on SDGs Thematic sub-Committees. The Unit's work is guided and reviewed by the Provincial Technical Committee, Project Board established at the Federal level and Sub-Committee on the SDGs of the National Economic Council.

SDG'S IN SINDH[73]

The SDGs Support Unit Sindh is working with line departments of Government of Sindh, as well as UN Agencies, civil society organizations, academia and the private sector to integrate the strategies and policies with the 2030 Agenda, contributing towards accelerating progress in Pakistan. Specifically, the Unit undertakes activities under following four pillars to support SDGs implementation in Sindh.

[70] THE 17 GOALS | Sustainable Development
[71] Government of Pakistan – Sustainable Development Goals (SDGs) National Framework: Summary for the National Economic Council (NEC), Planning Commission, Ministry of Planning, Development & Reforms, March 2018.
[72] Sindh-SDGs-Framework.pdf
[73] Sindh-SDGs-Framework.pdf

Table 1 Four Major Outputs of the Mainstreaming, Accelerating, Policy Support for SDGs in Sindh project led by SDGs Support Unit Sindh

Policies and Plans	Data Reporting	Financing	Innovation
Mainstreaming SDGs in local development Plans and strategies clearly delineating the resource requirements.	Strengthening coordination, reporting and monitoring mechanisms for SDGs	Financing flows increasingly aligned with 2030 Agenda	Supporting integrated and innovative approaches to accelerate progress on SDGs on priority areas.

In April 2017, the P&D Board constituted a Core Group on SDGs to oversee formulation of the SDGs Framework for Sindh. The Core Group on SDGs has members representing government departments, academic institutions, private sector organizations, civil society organizations, and UN agencies. The SDGs support Unit Sindh, under the guidance of the Core Group on SDGs, has developed this framework, which will serve as a roadmap for mainstreaming and localization of SDGs in the province and enable institutions and stakeholders to accelerate achievement of Sindh's priority SDGs. The framework will also be a useful resource for provincial policymakers and development planner, development partners, civil society organizations, academia and anyone involved in the implementation and monitoring of the SDGs. The framework is presented as a living document – one that will evolve over time and will be updated/improved based on new data as well as feedback and lessons learnt from implementation of interventions to achieve the SDGs.

13.3 Localization of SDGS[74]

"Localization" is the process of considering subnational contexts in the achievement of the 2030 Agenda, from the setting of goals and targets, to determining the means of implementation and using indicators to measure and monitor progress. Localization of the SDGs also means using the agenda 2030 framework to translate national development priorities as per provincial and local level needs. Accordingly, the localization of the SDGs has remained one of the priority areas of the post 2015 discussions.

In Pakistan, there is a strong need for such localization efforts to go beyond the national level by incorporating location specific peculiarities. In the post 18th Amendment Constitutional Dispensation, localization has become the most critical element of an effective implementation mechanism for SDGs. In the current devolved governance structure, Pakistan needs effective coordination mechanisms through which national and provincial plans and actions could be synthesized by sharing experiences and best practices.[75]

As part of proactive efforts to localize the SDGs, Pakistan has established Federal SDGs Support Unit, housed in the Planning Commission, while provincial SDGs Support Units (in each provincial Planning &

[74] Sindh-SDGs-Framework.pdf
[75] SDPI, Post 2015 Development Agenda- National Dialogue on Strengthening Capacities and Institutions Pakistan Consultation Report (Draft) December 2014

Development/Board) have been established in all provinces (and regions). In this context, the Government of Sindh has also established the institutional structures to support localization and implementation of the SDGs in the province including six SDGs Thematic Sub-committees constituted in line with the prioritization criteria of the SDGs set by the GoS.

Pakistan's development framework (Pakistan Vision 2025) also has similarities with the SDGs framework and focuses on the areas of social and environmental sectors, which have become the provincial subjects after the 18th Constitutional Amendment. As such, most of the SDGs' targets now fall under the preview of the provinces. This calls for localization and ownership of the SDGs at the provincial level and needs to be considered as key to the SDGs achievement. This also requires repositioning of the provincial governments as the SDGs focal tier and to develop Provincial SDGs Frameworks in which the targets are aligned with local priorities to cater to the requirements in the context of resources at the local level.

13.4 Sustainable Development Goals in Hala City

13.4.1 Existing Situation

In the current state of affairs in Hala City, there are pressing challenges across various sectors related to Sustainable Development Goals (SDGs). From issues of food insecurity and limited healthcare access to concerns about education clean water, employment, and economic diversification, the city faces a complex array of obstacles. Addressing these challenges requires a multifaceted and coordinated effort, involving stakeholders from various sectors and levels of governance. The existing situation underscores the importance of comprehensive strategies and targeted interventions to foster sustainable development, improve the quality of life for resident, and align with the global objectives outlined in the SDGs. The existing situation is derived from data obtained through a random sample socioeconomic survey, providing valuable insights into the city's present socioeconomic landscape.

The imperative lies in orchestrating coherent strategies and implementing specific interventions aimed at fostering sustainable growth. Such collaborative endeavors are essential not only to enhance the living standards of Hala City's inhabitants but also to contribute meaningfully to the global aspirations embodied in the SDGs. These challenges underline the critical need for holistic and well-coordinated policy measures, reinforcing the commitment to sustainable urban development and improved well-being for all residents. The foundation of this situational analysis is the insightful data gleaned from a socio-economic survey conducted through random sampling. This data offers a valuable snapshot of the current socio-economic fabric of Hala City, providing a robust basis for shaping strategies and directing efforts towards the effective realization of the SDGs. It is through this informed understanding that Hala City can envisage and enact a transformative pathway towards sustainable and inclusive growth.

As per TOR in view of the National Commitment with SDGs following SDGs goals have been selected.

1. Goal No.2 Zero Hunger
2. Goal No.3 Good Health and well-Being
3. Goal No.4 Quality Education
4. Goal No.6 Clean Water and Sanitation
5. Goal No.7 Affordable and clean energy
6. Goal No.8 Decent work and economic growth
7. Goal No.11: Make cities and human settlements inclusive, safe, resilient and sustainable.

In case of Hala City, there are pressing challenges across various sectors related to Sustainable Development Goals (SDGs). Starting from issues of food insecurity, potable water, education, health, employment, and economic diversification, the city faces a multifaceted collection of obstacles. Addressing these challenges requires a complex and coordinated effort, involving stakeholders from various sectors and levels of governance. The existing situation underscores the importance of comprehensive strategies and targeted interventions to foster sustainable development, improve the quality of life for residents, and align with the global objectives outlined in the SDGs. The existing situation is derived from data obtained through a random sample socioeconomic survey, providing valuable insights into the city's present socioeconomic landscape.

13.5 Integration Of Sustainable Development Goals (Sdgs) Into the Strategic Development Plan for Hala City

In accordance with the Terms of Reference (TOR), the Strategic Development Plan (SDP) for Hala integrates the Sustainable Development Goals (SDGs) into the city's development framework. Seven SDGs have been prioritized at the national and provincial levels – Goal 2: Zero Hunger, Goal 3: Good Health and Well-Being, Goal 4: Quality Education, Goal 6: Clean Water and Sanitation, Goal 7: Affordable and Clean Energy, Goal 8: Decent Work and Economic Growth, and Goal 11: Sustainable Cities and Communities. For each of these goals, a dedicated Implementation Plan matrix has been developed. These matrices map the SDG targets and indicators against the baseline survey results of Hala, each matrix also references relevant policies and frameworks at the national and provincial levels, ensuring alignment between local planning, Sindh's sectoral strategies, and Pakistan's commitments under the 2030 Agenda. Collectively, these seven implementation plans provide a comprehensive roadmap for mainstreaming SDGs into urban planning, guiding both immediate actions and long-term monitoring.

It is important to note that while this report provide the structured SDG Implementation Plan, further technical details and sector-specific interventions are elaborated in companion reports, including the Strategic Development Plan (full volume), Economic Development Plan, Immediate Action Plan (IAP), Priority Projects Report, Disaster Management Plan, and Climate Change, Resilience & Adaptability Plan. Together, these reports provide a comprehensive roadmap for mainstreaming SDGs into urban planning, guiding both immediate implementation and long-term monitoring.

Table 13-1: SDG & SDP Sector Linkage

SDG	Relevant SDP Sectors	Key Focus Areas
Goal 2 – Zero Hunger	Agriculture, Economic Development	Food security, climate-smart agriculture, value chains, farmer livelihoods
Goal 3 – Good Health & Well-Being	Health, WASH, Disaster Risk Management	Healthcare access, disease prevention, sanitation in health facilities, emergency preparedness
Goal 4 – Quality Education	Education, Social Infrastructure	School rehabilitation, inclusive education, vocational/technical training, gender equity in education
Goal 6 – Clean Water & Sanitation	WASH, Environment, Urban Infrastructure	Safe water supply, wastewater treatment, stormwater drainage, hygiene awareness
Goal 7 – Affordable & Clean Energy	Energy, Municipal Services	Renewable energy (solar, wind), energy efficiency, clean cooking fuels
Goal 8 – Decent Work & Economic Growth	Economic Development, Industry, Trade	Skills training, agro-processing, women-led enterprises
Goal 11 – Sustainable Cities & Communities	Land Use, Urban Planning, Transport, Housing, DRM	Planned urban expansion, flood risk reduction, solid waste management, resilient housing, inclusive public spaces

Monitoring note: Each sector chapter specifies outputs, outcome indicators, and timeframes. These roll up into the city's SDG indicator set and will be reported annually to the Provincial SDG Unit.

13.6 Reference to Separate SDG Implementation Plan

The Strategic Development Plan (SDP) for Hala city provides the overall framework for integrating the Sustainable Development Goals (SDGs) into local development. However, the detailed analysis, sector-wise proposals, and implementation matrices for each SDG are presented in a **separate SDG Implementation Plan Report** (standalone volume).

This approach avoids duplication while ensuring coherence. The SDP highlights the alignment of key development priorities with the seven selected SDGs, whereas the SDG Implementation Plan provides:

- Detailed baseline analysis and survey findings.
- Sectoral gaps and challenges.
- Target-to-indicator mapping for each SDG.
- Implementation matrices with responsible institutions, timelines, and monitoring mechanisms.

In summary, the SDP ensures alignment of spatial and sectoral strategies with the 2030 Agenda, while the standalone SDG Implementation Plan provides the technical depth, implementation matrices, and monitoring framework necessary for operationalizing these commitments.

14. URBAN LAND MANAGEMENT

Urban areas across the developing world are facing a persistent shortfall in the supply of adequately serviced and affordable land to meet the housing and infrastructure needs of rapidly expanding populations. In Sindh, the issue is not a lack of virgin land but rather the absence of effective land management policies, limited fiscal resources to service land, and strong landowner control that restricts the timely release of land for planned urban development. As a result, low-income groups are often forced into informal settlements or unregulated housing, creating slum-like conditions.

Globally, land management is practiced through tools such as land pooling, reconstitution, and guided development, which balance the interests of landowners with the public good. In Pakistan, however, formal frameworks remain limited. Opposition to forcible land acquisition and weak financial capacity of Urban Local Bodies (ULBs) have further constrained the supply of serviced urban land. Land pooling and reconstitution (LPR) offers a viable solution by allowing landowners to share in the increased land values that result from infrastructure and service provision, while also contributing land and charges for public facilities.

14.1 Goals

As towns in Sindh, including Hala, strive to position themselves as centers of production, trade, and employment, effective urban land management is critical. The overarching goals are:

- To ensure efficient spatial structures, with well-connected transport systems and serviced land supply.
- To provide adequate infrastructure, affordable housing, and urban amenities that enhance livability.
- To support urban regeneration, the development of new industrial and commercial districts, and foreign direct investment.
- To safeguard the environment through planned land allocation for parks, green buffers, and hazard-prone zones.
- To strengthen social overhead capital, including housing, education, and healthcare facilities.

14.2 Objectives

As towns in Sindh, including Hala, strive to position themselves as centers of production, trade, and employment, effective urban land management is critical. The overarching goals are:

- To ensure efficient spatial structures, with well-connected transport systems and serviced land supply.
- To provide adequate infrastructure, affordable housing, and urban amenities that enhance livability.
- To support urban regeneration, the development of new industrial and commercial districts, and foreign direct investment.
- To safeguard the environment through planned land allocation for parks, green buffers, and hazard-prone zones.
- To strengthen social overhead capital, including housing, education, and healthcare facilities.

14.3 Urban Land Management in Hala

Hala reflects the broader provincial challenges of urban land management:

- Absence of a Provincial Framework: There is no comprehensive Sindh-level policy guiding urban land use and land pooling. As a result, planners and development authorities approve projects without adequate assessment of transport or utility impacts.
- Infrastructure Stress: Approved housing and commercial schemes have intensified traffic congestion, water shortages, and sewerage system failures.
- Conflict with Agriculture: Allocation of fertile agricultural land for industrial and residential use has discouraged farming and reduced agricultural output in the region.
- Land Rights and Governance Issues: Corruption, weak land records, and bureaucratic inertia have impeded land redevelopment and reallocation.
- Inadequate Land Use Planning: Land use plans have not been updated to meet the demands of post-industrial development, creating mismatches between planned and actual urban growth.

To address these issues, the public sector must take a proactive lead by:

- Establishing a provincial urban land management framework that promotes sustainable urban growth.
- Introducing land pooling and reconstitution models to increase serviced land supply while protecting landowner interests.
- Integrating transport, utilities, and land use planning to reduce congestion and ensure efficient infrastructure use.
- Safeguarding agricultural zones while earmarking specific areas for industrial and commercial development.
- Promoting transparent land governance through digitized land records, cadastral surveys, and participatory land use planning.

14.4 Land Pooling and Reconstitution

Simply put, in LPR, a number of small holdings are pooled together, a part of land is taken from each plot for provision of infrastructure and public facilities and the rest returned to the original land owners. It is basically a land management tool and is used all over the world under different names with slight modifications in their working.

14.5 Land Management Techniques

The strategies available for access to urban land could be through Guided land development for large areas; Land pooling and reconstitution; Land reconstitution / redevelopment; Acquisition for public purpose under the Land Acquisition Act, 1894; Joint Sector Model of land assembly and development; Transferable Development Rights (for built up areas); Saleable FAR and mixed-use concept (for regeneration of inner city); Land Pooling and Redistribution Scheme.

A. Land Acquisition Act, 1984

In Pakistan, the Land Acquisition Act, 1984 gives the right for Government authorities to acquire parcels of land for the implementation of development projects. The origin of the practice of land acquisition by public entities in Subcontinent goes back to 1824, when the British Government of India instituted regulations to facilitate urban land public acquisition from private owners. In fact, the obligation for owners to give up their land had to find a legitimate justification. The initial reason advanced to acquiring the land against their will was the need for constructing public buildings in Bengal provinces. These regulations enabled the British government to take possession of the land for the construction of roads and canals. From 1850 on, the scope of these laws was extended to other provinces in order to facilitate the operation of further infrastructure projects such as railways.

The Land Acquisition Act was edited in 1984. It harmonized and consolidated previous regulations into one single act, applicable within the whole British India. After Pakistan's independence in 1947, the Pakistan Government started using this act as a tool to purchase land at a lower price than that on the regular market, as it was meant to be used in the public interest. Several amendments have been made on this act, but its procedures have not changed.

B. Land readjustment / pooling

Land readjustment / pooling Land re-adjustment is a process whereby a public authority assembles numerous small parcels of raw land without paying compensation to the owners. The authority then sub-divides such assembled lands for urban use returning most of the building sites to the original owners in proportion to the value of their land contribution and permitting them the right of alienating such sites. The authority retains a portion of the assembled lands, applying them partly to provide civic amenities such as roads, parks and gardens or schools, and the remainder land for public sale to recover the cost of development. Thus, land re-adjustment acts as tool to achieve unified control over large areas of land and as an instrument of financing public service installations in the process of planned urban growth.

C. Guided Urban Development

The concept of Guided Urban Development (GUD) emerged in response to ad hoc, uncontrolled urban development with no regard to infrastructure services. It also aims to secure a limited availability of urban land for economically weaker sections. GUD has been practicing in India and developing world. The objectives of the scheme are as follows:

- Ensure provision of serviced plots for low-income families at affordable prices (approximately 75% of total plots to be reserved for EWS / LIG); and
- Provide incentives to the land owner / private developer to participate in the provision of low-income shelter by guaranteeing fair return on investments (profit of 20-30%).

The challenges faced in Sindh Province, particularly in Hala City, highlight the need for effective urban land management strategies. The introduction of tools like Land Pooling and Reconstitution, along with other techniques, aims to address issues of land supply, infrastructure development, and sustainable urban

growth. The emphasis on public-private partnerships and the role of the public sector in planning and formulating strategies reflects a comprehensive approach to achieving sustainable urban development in the region.

i. **Land Revenue Laws:**
   - **Sindh Board of Revenue Act 1957:** Governs the organization and functioning of the Board of Revenue, which plays a key role in land administration.
   - **Sindh Land Revenue Act 1967:** Focuses on the assessment and collection of land revenue, determining land ownership, and related matters.
   - **Sindh Land Revenue Rules 1968:** Provides detailed rules for the implementation of the Land Revenue Act.

ii. **Land Acquisition Laws:**
   - **Land Acquisition Act 1894:** Outlines the procedures, compensation mechanisms, and dispute resolution processes for acquiring land for public purposes.

iii. **Land Disposal Laws:**
   - **Sindh Disposal of Urban Land Ordinance 2002:** Regulates the sale, lease, or transfer of urban land within the limits of cities, towns, or municipalities by the government or its agencies.

iv. **Land Planning Laws:**

- **Sindh Town Planning Act 1915:** Focuses on the planning and regulation of urban development, including zoning, land use, and building standards.
- **Sindh Regulation and Control (Use of Agricultural Land for Non-Agricultural Purposes) Rules 1994:** Deals with regulating the use of agricultural land for non-agricultural purposes.
- **Sindh Environmental Protection Act 2014:** Addresses environmental concerns related to land development.
- **Sindh Master Plan Authority Act 2020:** Likely establishes an authority for master planning to guide the spatial development of the province.

The outlined laws cover a wide spectrum of aspects related to land management in Sindh. From revenue collection to land acquisition, disposal, and planning, these legal frameworks are essential for maintaining order, ensuring fairness, and promoting sustainable development in the use of land throughout the province. They provide a foundation for responsible land governance and urban developments.

The challenges faced in Hala haphazard land conversion, weak enforcement of zoning, and inadequate infrastructure in approved schemes—highlight the urgency of adopting **modern land management tools**.

- **Land Pooling and Reconstitution** can make serviced land available without the heavy fiscal burden of compulsory acquisition.
- **Guided Urban Development** can ensure inclusive housing supply and protect low-income groups.
- **Provincial Legal Frameworks** need harmonization to integrate LPR and GUD into master planning.

- **Public–Private Partnerships (PPPs)** should be promoted for financing and implementing urban expansion schemes.

Together, these tools provide a pathway for planned, equitable, and sustainable growth in Hala, aligning with broader provincial objectives of urban transformation.

14.6 Strategic Development Plan

The Strategic Development Plan for urban land management in Hala aims to ensure the efficient supply of serviced land, planned urban expansion, and inclusive access for housing, commerce, and industry. The plan emphasizes legal reforms, institutional strengthening, and innovative land management tools to promote sustainable urban growth.

I. Short-Term Plan
- Conduct a City Survey & Cadastral Survey (priority action):
  - Digitize land parcels, ownership, and tenure records using GIS and satellite imagery.
  - Resolve overlaps, encroachments, and disputed lands by preparing an authentic cadastral map of Hala.
  - Link land records with Sindh Board of Revenue and Municipal Committee for transparency.
- Pilot Land Pooling & Reconstitution (LPR) in peri-urban Hala.
- Develop GIS-based Land Information System (LIS) integrating land use, transport, and utilities.
- Enforce building regulations and zoning bylaws in city core to control haphazard development.
- Reserve serviced plots for low-income housing in all new schemes.
- Establish Ward Development Committees for monitoring encroachments.
- Conduct land and building audits to identify underutilized or illegally occupied plots.

II. Long-Term Plan
- Introduce Transferable Development Rights (TDRs) for densification and regeneration of inner-city areas.
- Develop peri-urban agriculture protection zones to secure food systems while planning controlled expansion.
- Launch PPP-based industrial and commercial zones, ensuring proper infrastructure and access roads.
- Establish a city land bank to acquire and manage land for future public amenities, roads, and social infrastructure.
- Institutionalize Land Pooling & Redistribution Schemes as a standard model for urban expansion.
- Redevelop inner-city katchi abadis through mixed-use redevelopment models (with saleable FAR and cross-subsidization).
- Promote regional-level land management under the Sindh Master Plan Authority, linking Hala with Hyderabad, Sanghar, and Nawabshah.
- Achieve sustainable urban expansion with adequate green spaces, resilient housing, and climate-smart infrastructure.

15. IMPLEMENTATION STRATEGY

The successful implementation of the Strategic Development Plan (SDP) for Hala is contingent upon a robust and realistic implementation strategy. This section outlines the institutional, legal, and financial mechanisms required to translate the plan's vision into tangible outcomes. The strategy is designed to be a practical and phased guide for all stakeholders, ensuring the plan's objectives are met through a coordinated and accountable approach.

15.1 Process of Implementation

Implementation of the SDP requires careful prioritization, phasing, coordination, budgeting, and monitoring. The key steps include:

- Determining priorities within and among sub-plans and proposed projects.
- Sequencing activities through short-, medium-, and long-term phasing.
- Linking projects to budget availability and financing sources.
- Preparing a master implementation schedule with progressive cost tables.
- Assigning activities to responsible institutions and qualified managers.
- Establishing a monitoring and reporting system to track progress and maintain public transparency.

15.2 Institutional Framework and Setup

A clear and empowered institutional framework is essential for effective implementation. The proposed setup is designed to align with existing governance structures while addressing key gaps in coordination, technical capacity, and a unified mandate.

Primary Implementation Authority (City Level):

Proposed Body: The **Hala Urban Development Authority (H-UDA)**, operating under the legal cover of the Sindh Master Plan Authority Act 2020.

Role and Mandate: To serve as the central coordinating and executive body for the SDP. Its comprehensive mandate includes:

- Spearheading land use planning and development control.
- Conducting project appraisal and preparing statutory documents (e.g., PC-1s).
- Directly implementing key projects identified in the Short-Term Action Plan.
- Acting as the primary liaison between local, district, and provincial government agencies to ensure seamless coordination.

Realistic Setup & Phased Establishment:

- **Phase 1 (Immediate):** The H-UDA will be established as a specialized, empowered unit within the existing Municipal Committee. It will be headed by a dedicated Director, with a core team comprising an Urban Planner, a Civil Engineer, a GIS Specialist, and a Financial Analyst. This structure allows for the immediate commencement of priority tasks while the institutional capacity is built.
- **Phase 2 (Long-Term):** The unit will progressively evolve into an autonomous authority with its own funding mechanisms and legal powers, provided its initial performance meets established benchmarks.

15.3 Coordination and Collaboration

District Coordination Committee (DCC): Headed by the **Deputy Commissioner**, the DCC will be the central forum for all SDP-related activities at the district level. Its members will include the Director of H-UDA and all relevant district-level officers from departments such as Irrigation, Health, Education, and Agriculture. The DCC's mandate is to ensure horizontal coordination, resolve inter-departmental conflicts, and provide administrative oversight.

Provincial Liaison: The H-UDA will report to the Sindh Master Plan Authority, which will serve as the primary provincial-level oversight body. This ensures that the SDP's implementation remains aligned with provincial goals and facilitates the allocation of funds from the Planning & Development Department, Sindh.

15.4 Provincial-Level Alignment:

- **Sindh Master Plan Authority (SMPA):** Approves the Master Plan and ensures alignment with provincial strategies.
- **Planning & Development Department (P&D), Sindh:** Facilitates project appraisal, funding allocations (ADP/PSDP), and liaison with donors.
- **Sindh Local Government Department (LGD):** Oversees municipal committees, providing policy guidance on urban services.

Roles and Responsibilities:

- **Deputy Commissioner:** Administrative oversight and chairing of DCC.
- **Municipal Committee/ Town Committee:** Operation and maintenance of core municipal services (solid waste, drainage, sanitation, minor roads).
- **Public Health Engineering Department (PHED):** Planning and execution of water supply and sewerage projects.

- **Line Departments:** Health, Education, Irrigation, and Agriculture to implement sectoral proposals.
- **Community-Based Organizations (CBOs):** Mobilization, monitoring, and grassroots participation.

15.5 Legal and Policy Basis

Implementation of the SDP will be grounded in existing laws and frameworks:

- **Constitution of Pakistan (1973):** Provides the supreme legal basis for planning, development, and land acquisition.
- **Sindh Master Plan Authority Act, 2020:** Legal basis for preparation, approval, and enforcement of Master Plans.
- **Sindh Local Government Act, 2013 (amended 2016):** Governs municipal committees and urban service delivery.
- **Regional Interim Building & Town Planning Regulations – 2018:** The specific, currently active regulations for building control and town planning that will be enforced by the H-UDA.
- **Sindh Land Revenue Act, 1967 & Rules, 1968:** Governs land records, ownership, and revenue administration.
- **Land Acquisition Act, 1894:** Provides mechanisms for land acquisition for public purposes.
- **Other Relevant Frameworks:** Sindh Environmental Protection Act (2014), Sindh Sanitation Policy (2017), Sindh Drinking Water Policy (2017), and National Reference Manuals for planning standards.
- **Regional Interim Building & Town Planning Regulations – 2018**

15.6 Approval and Enforcement:

- **Plan Approval:** Sindh Master Plan Authority.
- **Development Control:** H-UDA and Municipal Committee (zoning, NOCs, building regulations).
- **Monitoring:** District Coordination Committee, with oversight by P&D Department Sindh.

15.7 Implementation Mechanism and Phasing

Implementation will follow a phased and pragmatic approach:

Phase 1 – Short-Term (1–3 years):

- Establish H-UDA within Municipal Committee.
- Conduct cadastral and city survey to digitize land records.
- Launch pilot Land Pooling & Reconstitution (LPR) project in peri-urban fringe.
- Begin Immediate Action Plan (IAP) projects (solid waste, drainage, core infrastructure).

Phase 2 – Medium-Term (4–10 years):

- Institutionalize LPR as standard urban expansion model.
- Operationalize GIS-based Land Information System (LIS) for planning decisions.
- Implement Priority projects in commercial, industrial, and housing sectors.
- Begin large-scale infrastructure upgrades (water, sewerage, roads).

Phase 3 – Long-Term (10–20 years):

- Redevelop katchi abadis through mixed-use regeneration.
- Integrate Hala into regional growth corridors (Nawabshah–Hyderabad axis).
- Advance climate-resilient housing, green mobility, and flood protection measures.

15.8 Funding Sources and Mobilization

Public Sector:

- **Annual Development Programme (ADP):** Provincial funding for infrastructure and utilities.
- **Public Sector Development Programme (PSDP):** Federal funding for large-scale or strategic projects.
- **Municipal Budgets:** Maintenance, ward-level works, and minor capital projects.

Donor Agencies & Development Partners.

- World Bank, ADB, UN-Habitat, and bilateral donors for WASH, climate resilience, and institutional strengthening.
- Project-specific technical assistance and concessional financing.

Private Sector & PPP Models:

- **Sindh PPP Node:** Institutional mechanism to structure PPPs in infrastructure, housing, and utilities.
- **Land-Based Financing:** Revenue from LPR schemes and sale of developed plots.
- **Private Investment:** Incentives for builders/developers via streamlined approvals and zoning certainty.

15.9 Stakeholder Guidance and Capacity Building

Government Institutions:

- Clear mandates defined for H-UDA, MC, DCC, and SMPA.
- Training on urban planning tools, GIS/LIS systems, and project management.

Private Sector & Developers:

- Predictable regulatory environment to attract investment.
- Capacity building on PPP processes and compliance with zoning/building codes.

Community & Civil Society:

- Public hearings and participatory planning processes.
- Community-based monitoring of services and projects.
- Awareness programs on housing, WASH, and disaster preparedness.

The Implementation Strategy provides a structured pathway from planning to execution. By embedding SDPs into provincial frameworks, strengthening local institutions, diversifying funding, and engaging stakeholders, Hala can achieve sustainable, inclusive, and resilient growth. The proposed strategy ensures that the Master Plan moves beyond a vision document into a practical instrument for long-term transformation.