

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



Presentation

on

URBAN INFRASTRUCTURE DEVELOPMENT IN SINDH:

to

*Pakistan Development Forum
at Islamabad*

by

Ghulam Sarwar Khero

Additional Chief Secretary (Dev.)

Planning and Development Department

Government of Sindh

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Contents

- ❖ **Identifying Urban Growth Centres**
- ❖ **Millennium Development Goals and Current Status of Urban Service Provision**
- ❖ **Profile of Selected Urban Infrastructure Schemes**
- ❖ **Financing**



Urban Infrastructure in Sindh

- ❖ Housing
- ❖ Water Supply
- ❖ Sanitation
- ❖ Solid Waste Management
- ❖ Road Communication

Context of Urban Development in Sindh

- Sindh is a dual economy: Karachi and rest of Urban Sindh
- Higher rate of urban population growth (on account of uncontrolled in-migration) requires greater level of urban services
- Location in the province of the country's 2 ports, serving the entire country and Afghanistan, places additional demands on the urban infrastructure
- Water infrastructure cost is higher on account of:
 - Brackish sub-soil water
 - Need to purify and transport river water over long distance
- Sewerage infrastructure cost is higher on account of High sub-soil water table



Identifying Urban Growth Centres

Profile of Population

Population (million)	1998	2005 (estimated)	Growth rate (%)
Total	30.4	36.0	2.8
Urban population	14.8	17.6	3.5
Rural population	15.6	18.4	2.2

Share of urban population (Sindh):

48.8%

Source: Government of Sindh, Bureau of Statistics, *Development Statistics of Sindh 2004*

Districts with urban population growth rate above the average of 3.5%

District	Urban Population:1998 (Nos)	Growth Rate (%)
Dadu (<i>including Kotri City</i>)	361,000	5.2
Jacobabad	347,000	4.9
Badin	186,000	4.9
Larkana	557,000	4.7
Shikarpur	212,000	3.7
Karachi	9,339,000	3.6

Source: Government of Sindh, Bureau of Statistics, *Development Statistics of Sindh 2004*

Distribution of Urban Population

(%)

	Share in total urban population	Share of urban population in total district population
Karachi	62.9	94.7
Hyderabad	9.9	50.8
Larkana	3.8	28.9
Sukkur	3.1	50.9
Mirpurkhas	2.8	26.2
Khairpur	2.5	23.6
Dadu	2.4	21.4
Jacobabad	2.3	24.4
Sanghar	2.2	22.8
Nawabshah	1.9	26.4
Others	6.2	--

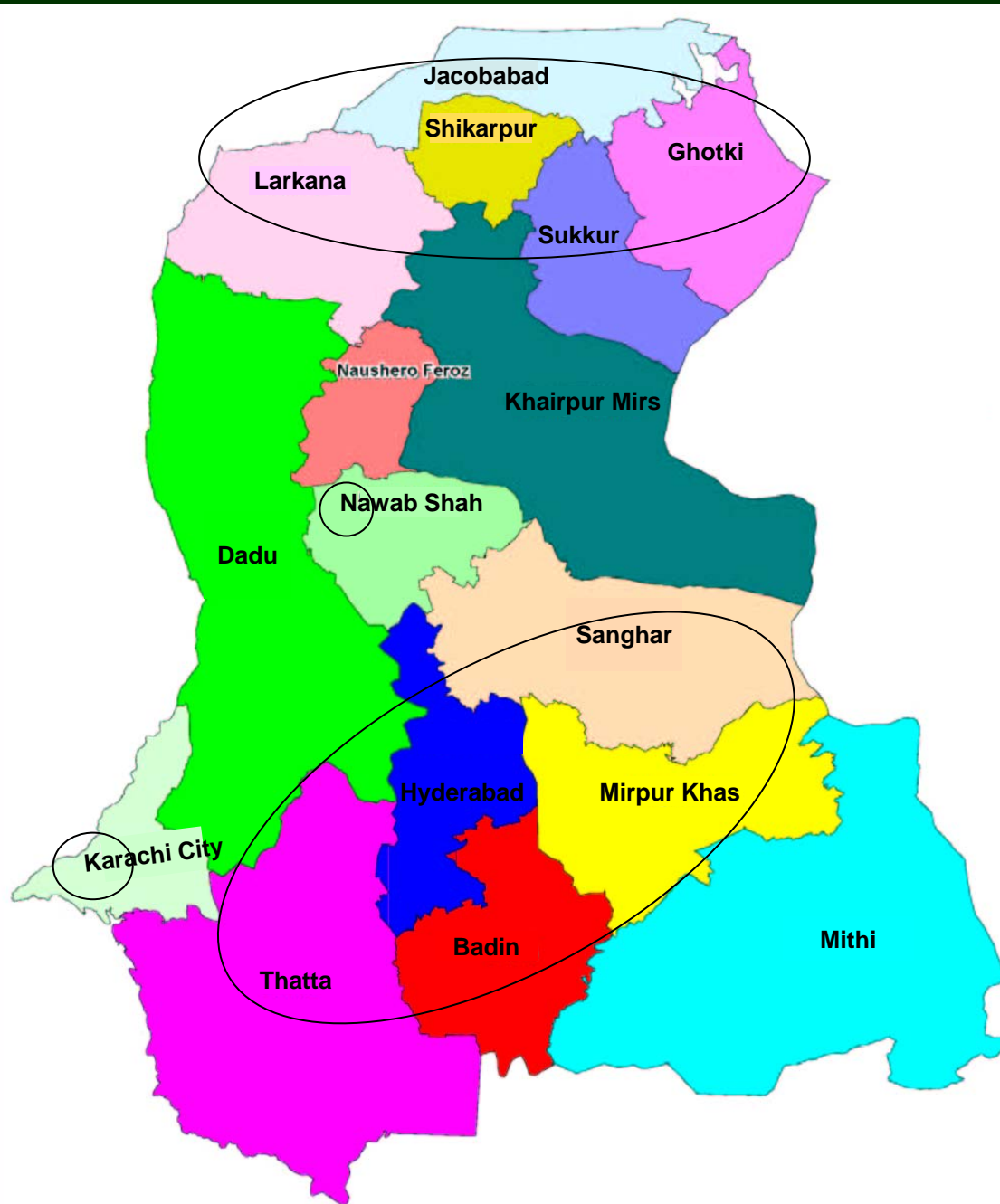
Source: Estimated from *Development Statistics of Sindh 2004*

Distribution of Industrial Activity

	Share in urban industrial labour force in total district labour force (%)		Share in large-scale manufacturing value added (%)
Karachi	21.1	Karachi	71.5
Hyderabad	9.6	Hyderabad	8.6
Ghotki	9.5	Dadu	7.5
Sanghar	6.9	Ghotki	4.8
Nawabshah	6.9	Thatta	2.3
Dadu	5.7	Sukkur	1.5
Larkana	5.3	Others	3.8

Source: *Development Statistics of Sindh 2004.*

Potential Urban Growth Areas in Sindh





Millennium Development Goals and Current Status of Urban Service Provision

Millennium Development Goals: Urban Quality of Life Indicators

(%)

Relevant MDG Indicators	Current Status	Target		
		2005-06	2011	2015
■ Proportion of katchi abadis regularized	81*	60	75	95
■ Proportion of population with sustainable access to a safe water source	90**	70	84	93
■ Proportion of population with access to sanitation	96***	55	63	90

*Does not necessarily imply improvement of physical quality of infrastructure

**Does not necessarily imply safe drinking water, including from piped sources

***Does not include treatment and final disposal

Selected Urban Housing Congestion & Quality Indicators

Districts	Persons per room	Rooms per housing unit	Percentage of Housing Units with		
			One room	Katcha roof	Inside piped water
Karachi	2.88	2.4	30.51	01.72	74.03
Hyderabad	3.35	2.0	46.60	15.55	78.63
Larkana	3.80	1.8	49.18	59.13	31.35
Sukkur	3.75	2.0	41.30	33.65	68.33
Mirpurkhas	3.62	2.1	38.70	25.77	79.15
Khairpur	4.00	1.7	54.27	55.87	30.67
Dadu	3.71	1.7	57.64	36.40	89.89
Jacobabad	3.76	1.7	56.50	50.28	42.72
Sanghar	3.94	1.8	51.12	33.21	87.62
Nawabshah	3.89	1.9	48.91	26.54	63.03
N. Feroze	4.00	1.8	51.92	38.38	28.17
Ghotki	3.61	1.8	53.28	32.25	36.16
Shikarpur	5.90	1.5	64.64	63.14	37.26
Thatta	3.75	1.6	60.10	50.02	54.93
Umerkot	3.26	1.9	45.79	53.47	46.16
Tharparkar	3.00	2.0	41.06	46.42	33.71
Badin	4.13	1.5	65.85	51.24	46.12
Sindh	3.09	2.2	36.25	14.77	68.21

Red implies > 3.5 < 2.0 > 50 > 50 < 40

Yellow represents best position

Profile of Infrastructure Gaps: Housing

Based on 1993-98 estimates,

- 134,648 housing units are required annually in urban Sindh.
- Only about 25% of the needs are met in the formal housing sector
- Given the increase in population and the backlog, the annual demand for housing is now larger
- A conservative estimate for demand for housing units can be placed at 200,000 per annum or 1.0 million housing unit over the next five years
- Yet, the pace of housing supply can be seen from the fact that
- Karachi issues only about 2500 building permits annually
- Thus, bulk of housing provision occurs in the *katchi abadis*.
- There are 1293 *katchi abadis* spread over an area of 25,409 acres.
- Out of these, 1157 were regularizable and
136 not regularizable due to their location on hazardous sites
- Out of the 1157 regularizable *katchi abadis*, 932 have been regularized
- Leases have been granted to 23,659 *katchi abadi* households, recovering Rs.284.6 million.

Profile of Infrastructure Gaps: 2005

Water Supply

City	Demand	Supply	Gap
Karachi	660	540	120
Hyderabad	55	54	1
Other cities/towns	179	138	41

Source: Planning and Development Department, Government of Sindh

Profile of Infrastructure Gaps: 2005

Sewerage/Drainage

(mgd)

City	Generation	Treatment capacity	Gap
Karachi	432	151	281
Hyderabad	45	4.3	35.7
Other cities/towns	Coverage to 83% of the population		

Source: Planning and Development Department, Government of Sindh



Profile of Selected Urban Infrastructure Schemes

Profile of Master Plans

- Karachi Master Plan was prepared for 1975-85 and 1985-2000. Currently, the City District Government of Karachi is preparing a Master Plan upto 2025 at a cost of Rs 200 million.
- A Greater Karachi Water Supply Master Plan study for upto 2025 has been proposed at a cost of Rs.159.7 million.
- A Greater Karachi Sewerage Master Plan study has been proposed at a cost of Rs.107 million for municipal and industrial waste water management up 2025
- Hyderabad Master Plan 1985-2000 is being updated for upto 2006-2026 is under preparation
- The Sukkur Master Plan prepared in 1991 has been updated upto 2020 by Town Planning Department, Government of Sindh
- Development/Structure Plans have been updated by Town Planning Department, Government of Sindh for:
 - Nawabshah ▪ Khairpur ▪ Mirpurkhas ▪ Shahdadkot
 - Tando Adam ▪ Rohri ▪ Tando Allahyar ▪ Naushero Feroze
 - Sanghar ▪ Dadu ▪ Larkana ▪ Thatta
 - Shikarpur ▪ Badin ▪ Jacobabad ▪ Mithi

Tameer-e-Karachi Programme

Period: 2003-2007

Total Cost: Rs.29.6 billion to be financed by:

▪ CDGK	Rs.6.0 billion
▪ GOS	Rs. 6.0 billion
▪ GOP	Rs. 5.0 billion
▪ Federal Agencies	Rs. 12.6 billion

Scope of the Programme:

▪ Updating of Master Plan	Rs. 600.0
▪ Rehabilitation of sewerage system, treatment plant, nullahs, and storm water drains	Rs. 8935.00
▪ Rehabilitation and extension of water supply system	Rs. 3000.00
▪ Establishment of desalination and power plant	Rs. 1550.00
▪ Solid waste management and land fill sites	Rs. 1500.00
▪ Procurement of equipment and machinery for cleaning nullahs and solid waste management	Rs. 1425.00
▪ Construction and repair of roads, bridges and flyovers	Rs. 12590.00

Profile of Infrastructure Schemes: Karachi

Sector / Status	No. of schemes	Amount (Million Rs.)
Roads*		
Completed (2000-2004)	22	1087.867
Ongoing	30	934.720
Tendering stage	4	910.00
Bridges/Flyovers/Underpasses		
Completed (2000-2004)	2	369.41
Under construction	2	244.67
PC-1 preparation stage	8	2900.00
Northern Bypass (<i>ongoing</i>)	1	5204.896 (R)
Lyari Expressway (<i>ongoing</i>)	1	5081.00
Lyari Expressway Resettlement	1	2871.65
Revitalization of Circular Railway (<i>ongoing</i>)	1	3000.00 (E)
Water Supply		
K-3: Karachi Water Supply Scheme (<i>ongoing</i>)	1	10500.00 (R)
K-4: Karachi Water Supply Scheme (proposed)	1	7000.00 (E)
Solid Waste Management		
(Approved by PDWP)	2	1127.60

*(Construction/dualization/ improvement/upgradation/ reconditioning/renovation)

Profile of Infrastructure Schemes: Hyderabad

Sector / Status	No. of schemes	Amount (Million Rs.)
<u>Roads*</u>		
Completed	374	364.120
Ongoing	45	193.72
PC-1 preparation stage	25	1259.89
<u>Water Supply (ongoing)</u>	1	48.67
<u>Sewerage/Treatment Plant (ongoing)</u>	3	1164.86

**(Construction/dualization/ improvement/upgradation/ reconditioning/renovation)*

Source: Planning and Development Department, Government of Sindh

Hyderabad Development Programme

Period: 2005-2008

Total Cost: Rs.10.5 billion

PC-1 to be approved

Scope of the Package:

Provision and expansion of:

Water Supply/Sewerage	Rs. 6650.00
Roads (Urban: Rs.682.5 million: Rural: Rs. 1000 million)	Rs. 1682.523
Electricity (Rural)	Rs. 1000.00
Gas (Rural)	Rs. 1000.00
Procurement of Fire Brigades	Rs. 160.00

Source: Planning and Development Department, Government of Sindh

Profile of Infrastructure Schemes: Sukkur

Sector / Status	Numbers	Kilometers	Amount (Million Rs.)
<u>Roads</u>			
Completed	41	37.79	65.59
Ongoing/Under Process	22	60.21	100.97
<u>Flyovers</u>			
Completed	1	-	0.30

Source: Planning and Development Department, Government of Sindh

Profile of Infrastructure Schemes

(Subject to availability of funds)

Mirpurkhas

Sector	Numbers	Kilometers	Amount (Million Rs.)
Roads (<i>Proposed</i>)	4	35	175.00
Flyovers (<i>Proposed</i>)	3	1.8	260.00
Water Supply (<i>Ongoing</i>)	1	-	399.41
Drainage (<i>Approved</i>)	1	-	198.74

Larkana (and Shahdadkot)

Sector	Numbers	Kilometers	Amount (Million Rs.)
Roads/Bridges/Flyovers (<i>Proposed</i>)	3	35	600.00

Source: Planning and Development Department, Government of Sindh

Schemes cleared by Provincial Government for Federal Funding

(Million)

Name of Scheme		Estimated Cost
▪ Urban Water Supply Scheme	Sanghar	Rs.216.548
▪ Urban Water Supply Scheme	Sukkur	Rs.626.409
▪ Urban Water Supply Scheme	Rohri	Rs.122.165
▪ Urban Water Supply Scheme	Nawab Shah	Rs.505.466
▪ Urban Drainage Scheme	Nawab Shah	Rs.345.614
▪ Urban Drainage Scheme	Sukkur	Rs.474.227
▪ Water Purification Plants: 24 Nos. (CDWP approved)	Atleast one in each District	Rs. 104.000



Financing

Summary of Financing Needs: 2005-2010

(Million Rs.)

	Housing <i>(Site & services only)</i>	Water Supply & Sanitation		Roads
Projected requirement:	1 million plots @ Rs.300,000/plot	Karachi	21,000	10,000 km
		Hyderabad	6,650	@ Rs.8.5
		Other Cities	4,567	million/km
	300,000		32,217	8,500

Source: Planning and Development Department, Government of Sindh

Sources of Development Financing: 2002-2005

	2002 (R)	2003 (R)	2004 (R)	2005 (B)
Provincial Contribution	4520 (45.0)	5713 (46.6)	10849.4 (56.8)	17977.5 (86.4)
Federal Assistance	22.5 (0.2)	22.5 (0.2)	5111.3 (26.8)	22.5 (0.1)
Foreign Project Assistance	1148.0 (11.0)	1597.0 (13.0)	1990.7 (10.4)	2410.0 (11.6)
Khushal Pakistan Programme	2800.0 (27.8)	3285.9 (26.8)	-	-
DERA (Drought Relief)	965.3 (9.6)	1648 (13.4)	1144.1 (6.0)	395.5 (1.9)
ESR	611.0 (6.0)	-	-	-
Total	10067.3 (100.0)	12268.0 (100.0)	19095.4 (100.0)	20805.5 (100.0)

Source: Government of Sindh, Bureau of Statistics, *Development Statistics of Sindh 2004*



Thank You