

Presentation from the
**Workshop on
Innovations for Scaling up to
Citywide Sanitation**

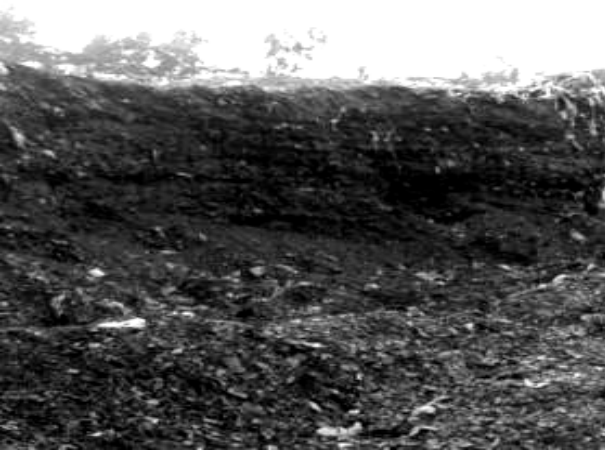
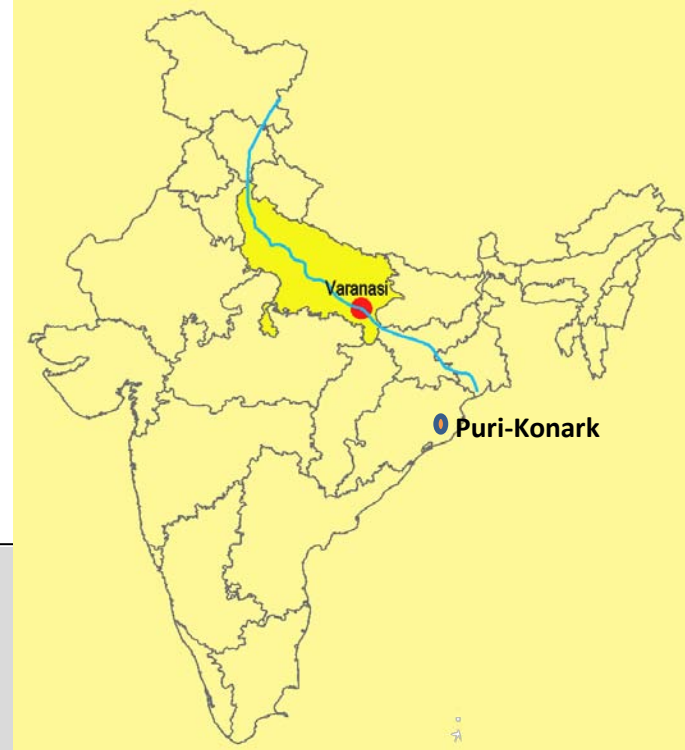
October 16-17, 2012, Ahmedabad



Organised by PAS Project, CEPT University

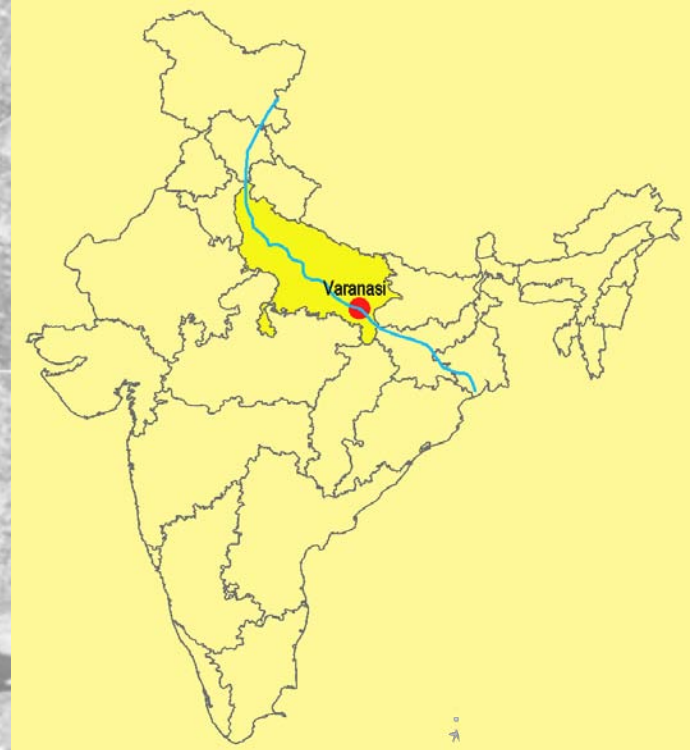
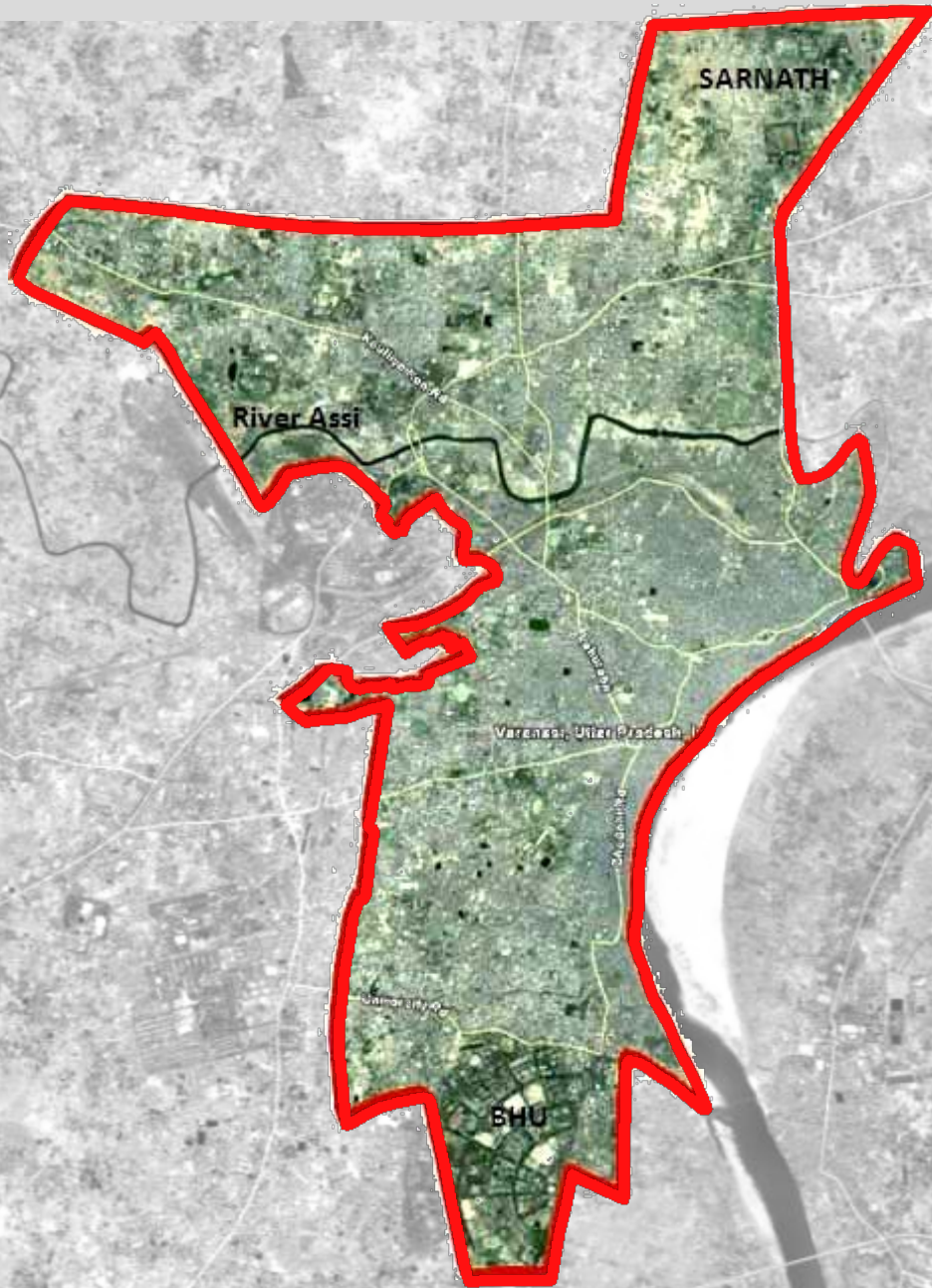
Structuring City Sanitation Plans-

Experiences from Puri-Konark and Varanasi



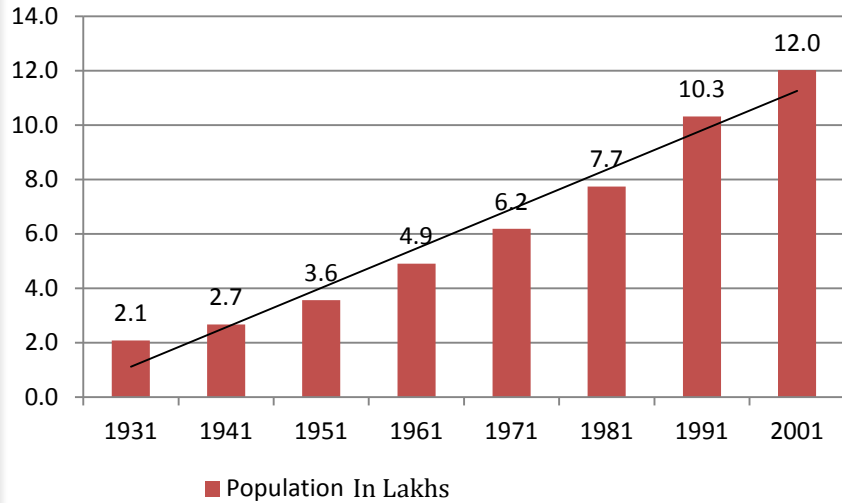
Saswat Bandyopadhyay
CEPT University

Varanasi

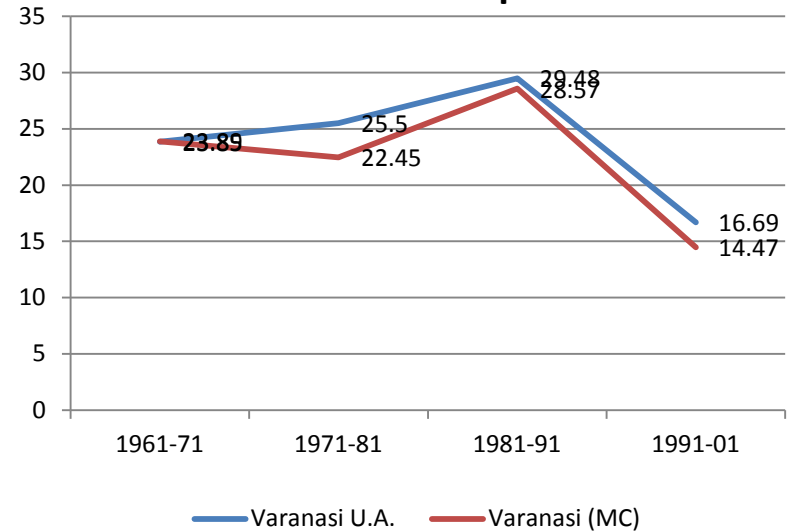


Varanasi

Population of Varanasi UA



Growth Rate Comparison

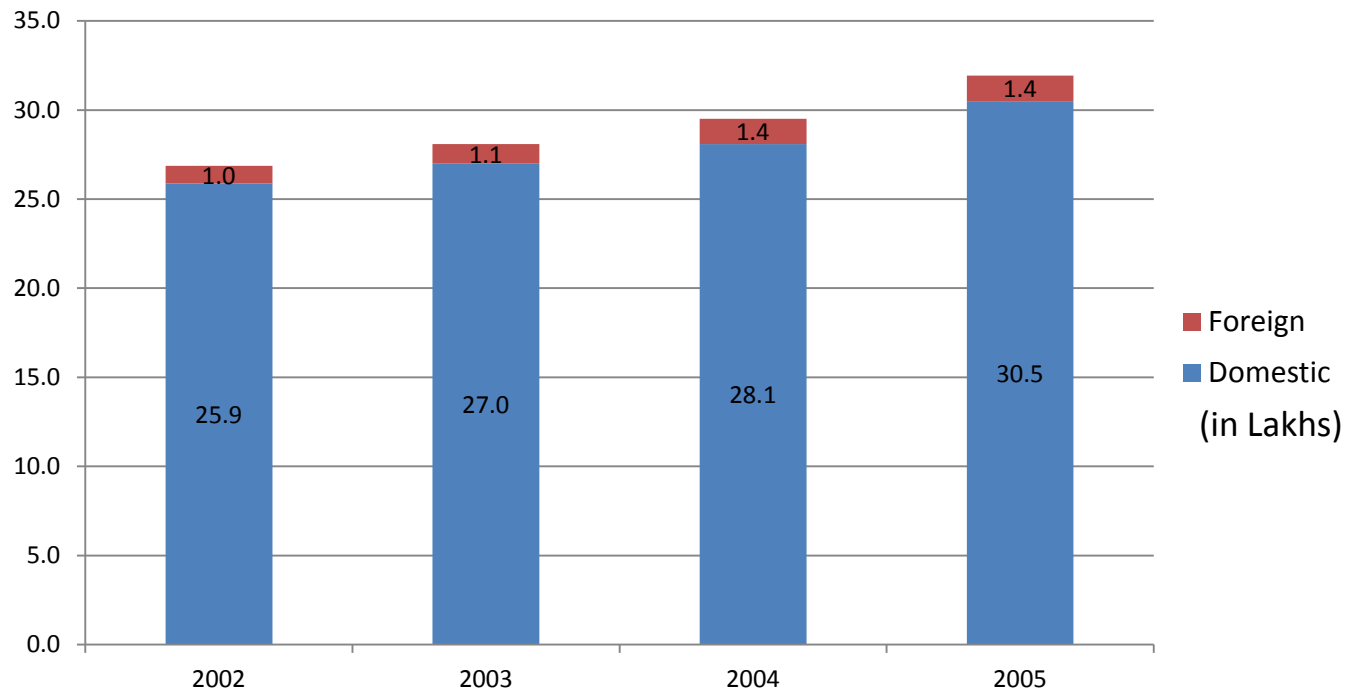


Year	1961	1971	1981	1991	2001
Population (in Lakhs)	4.9	6.2	7.7	10.3	12.0

	1961-71	1971-81	1981-91	1991-01
Varanasi Urban Agglomeration	23.85 %	25.5 %	29.48 %	16.69 %
Varanasi (Nagar Nigam)	23.89 %	22.45 %	28.57 %	14.47 %

Census 2011- 15,50,000

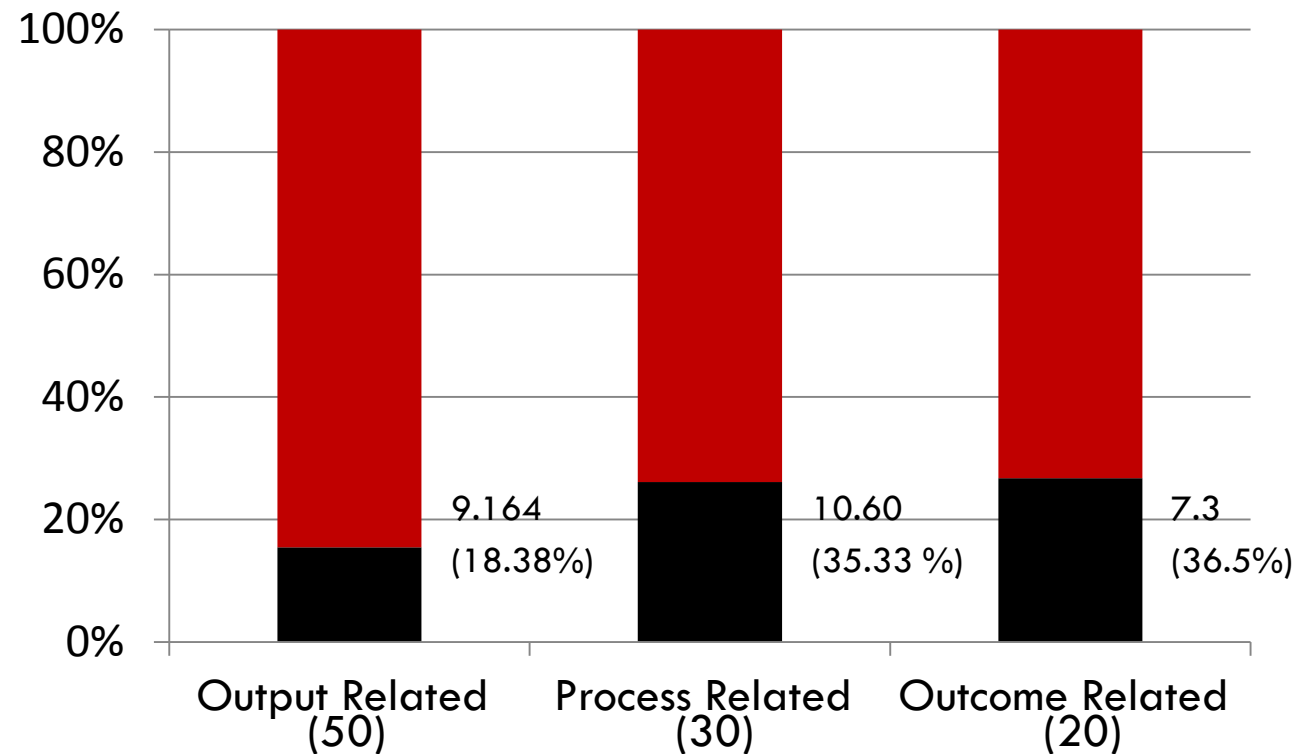
TOURIST INFLOW



Source: CDP, Varanasi

Average Annual Tourist Inflow 3.5 Million in 2010

Sanitation Ranking of Varanasi



Varanasi ranks **low**

The sanitation score is that of **27.084**

It is in the **Red Category**

NUSP Grades cities according to the ranking as follows

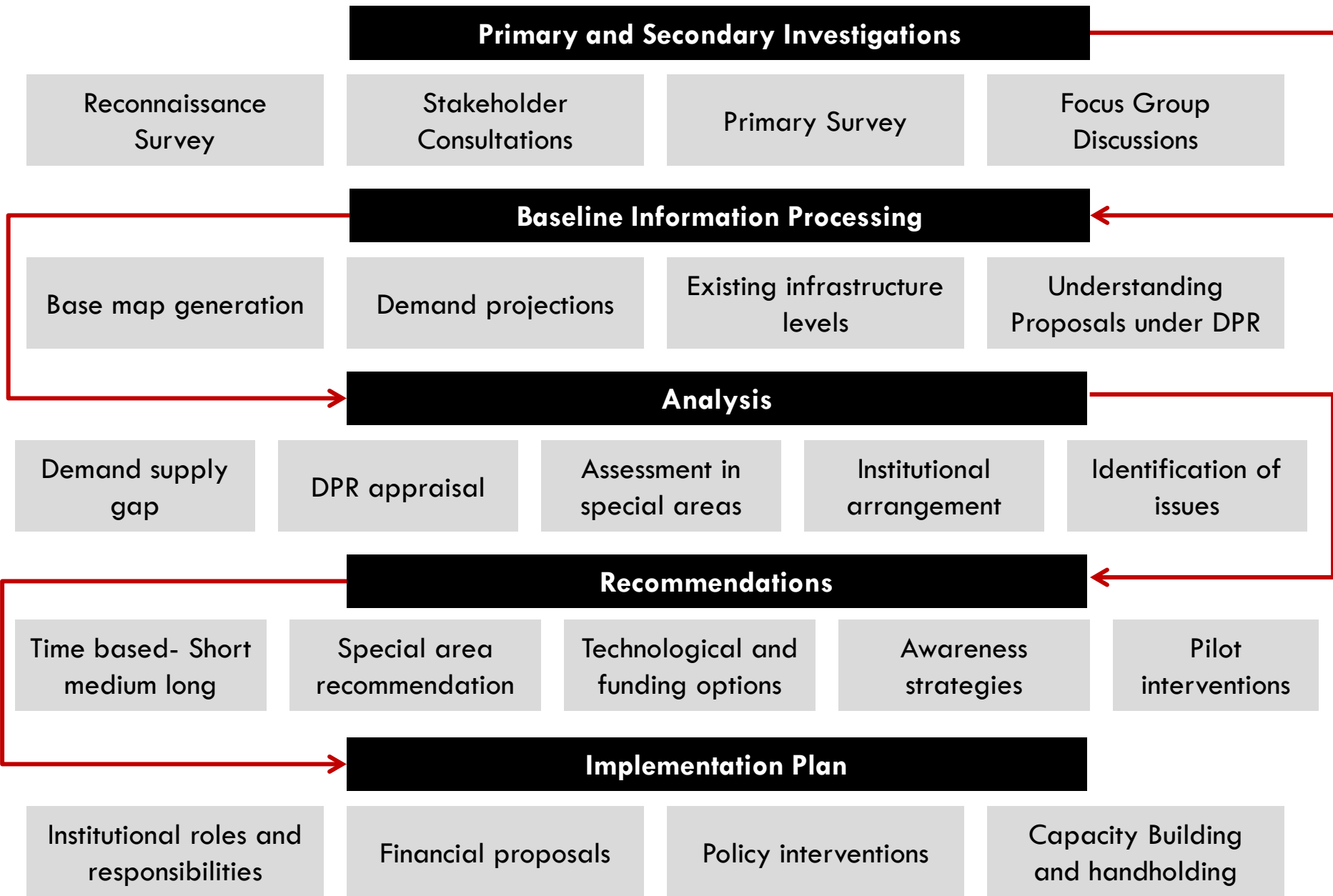
RED	Cities on the brink of public health & environment 'emergency' and needing immediate remedial action.	<33
BLACK	Needing considerable improvement	<34<=66
BLUE	Recovering but still diseased	<67<=90
GREEN	Healthy and clean city	<91<=100

Chandigarh is the Highest ranking city with a score of **73.48** among 423 cities ranked by NUSP

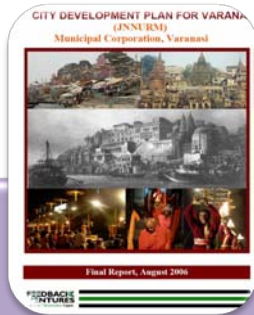
Need for CSP



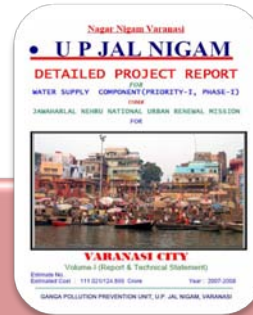
Process



REVIEW OF PAST & ONGOING PROPOSALS / SCHEMES



CDP- Varanasi



DPRs

- Water Supply
- Sewerage (Trans Varuna)
- Solid Waste Management
- Storm Water Drainage



Other Documents

- Ganga Action Plan
- JBIC

Overview of Activities under CSP



Identification
Hotspots, OD Areas



Survey of Community
& Public Toilet Blocks



HH Surveys (1500
HHs)



Investigations of
Storm & Surface
water Quality



Tourist & Traders
Survey (about 100)



Consultation with Key
city Officials & Depts.



Consultation with Key
Stakeholders

CSP, Varanasi-Key Discussions



Formation of CTF

- Officials of VNN, VDA, DUDA, UP Jal Nigam/Jal Sansthan, Ganga Pollution Control Unit etc,
- Representatives of major Civil Society, NGOs, Media & Academia



1st CTF on 9th June, 2010

- To provide a platform for different stakeholders to raise their concerns
- To Get their opinion on the methodology to proceed further for the CSP



2nd CTF 25th August, 2010

- Draft sanitation status of the city was presented
- Feedbacks obtained
- State Level Presentation, January, 2011, Luck now



3rd CTF 29th August, 2011

Draft sanitation Plan of the city was presented

Discussion Presentation VNN, December, 2011

4th CTF 19 May, 2012

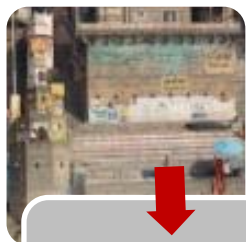
CSP, Varanasi



Key Sanitation Issues



Sanitation for
Urban Poor



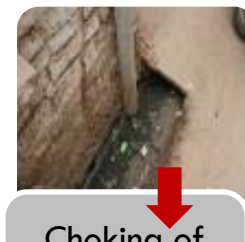
Lack of
access to
sanitation for
Tourist



Open
Defecation /
Urination



Poor Septage
Management



Choking of
Open Drains
leads to
Water
Logging



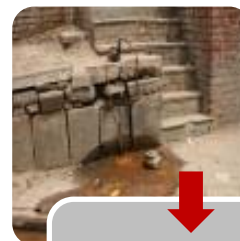
Sewer lines
mixed to
water supply
lines



SWM:
Multiple
Handling of
Waste



Frequent
clogging of
Strom Water
drains



Water Quality

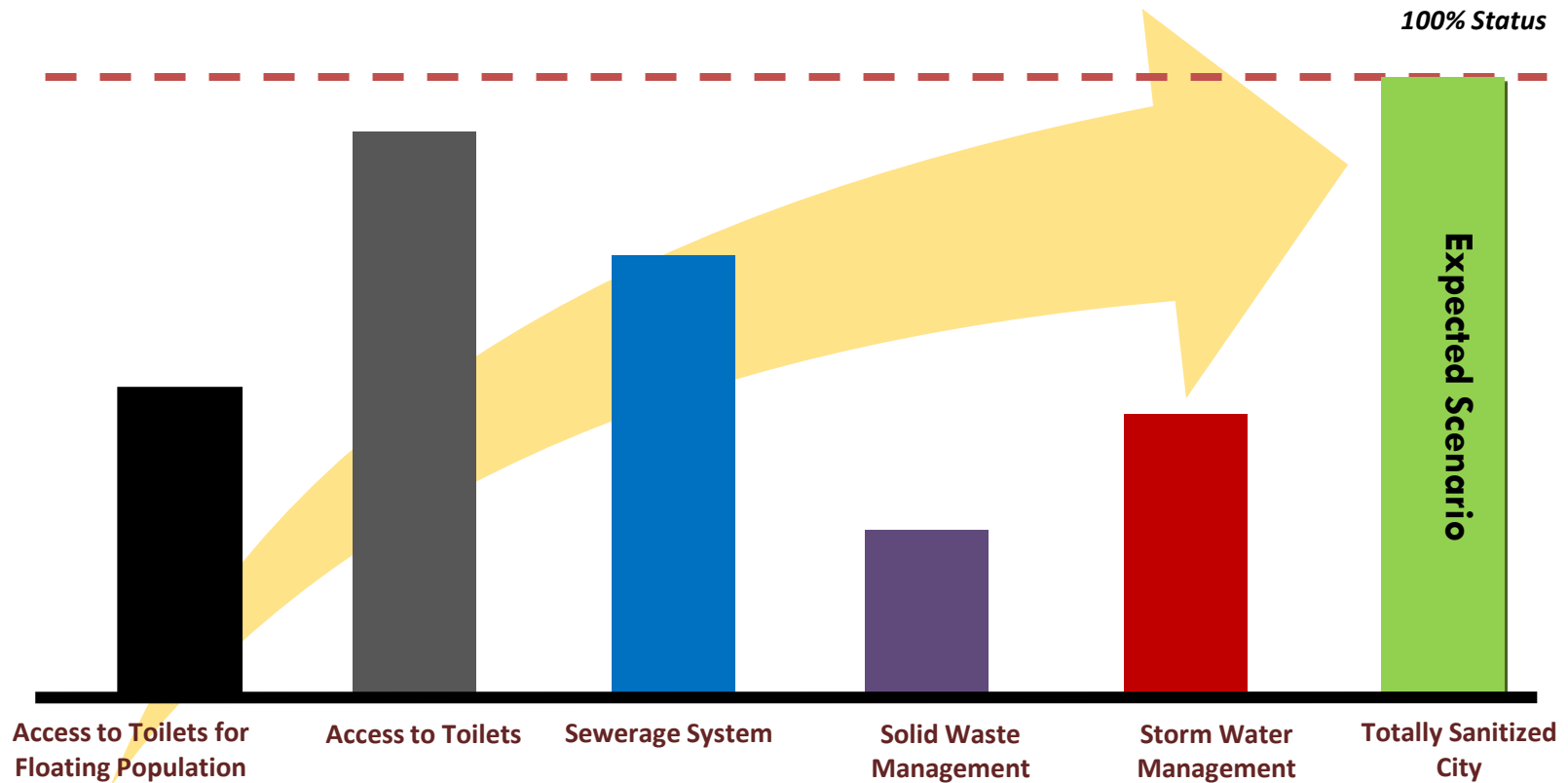


Sanitation
database
Management
and ULB
Manpower/
Capacity

INSTITUTIONAL ISSUES

Sector	Description	VMC	JKS	UPJN	VDA	DUD A	GPU	UPPCB
DEVE LOPM ENT PLAN	Urban Development Plan, Building Regulations, Layout Approval				√			
WATER SUPPLY	Plan, Design & Construction			√				
	HH Connection		√					
	O/M		√					
	User Charges		√					
SANITATION	HH Connection		√					
	Design Approval		√					
	HH Discharge Approval	√						
	Community Toilet	√				√		
	Public Toilet	√						
SEWERAGE	Plan, Design & Construction			√				
	HH Connection		√					
	Operation & Maintenance		√					
	Sewage Treatment Plant			√			√	
	Disposal			√			√	√
STROM WATER DRAIN AGE	Plan, Design & Construction			√				
	Operation & Maintenance	√						
SOLID WASTE MANAGEMENT	Collection	√						
	Storage	√						
	Transportation	√						
	Sorting & Processing	√						
	Disposal	√						

CSP-Nirmal Kashi 2020



With small incremental steps Varanasi can become totally sanitized by 2020

Nirmal Kashi by 2020

निर्मल काशी
Nirmal Kashi

Key Proposal - Access to Toilets

Public and Community Toilets in the city are **inadequate** and **under-maintained**. Major **urban poverty pockets** do not have **access** to toilets.

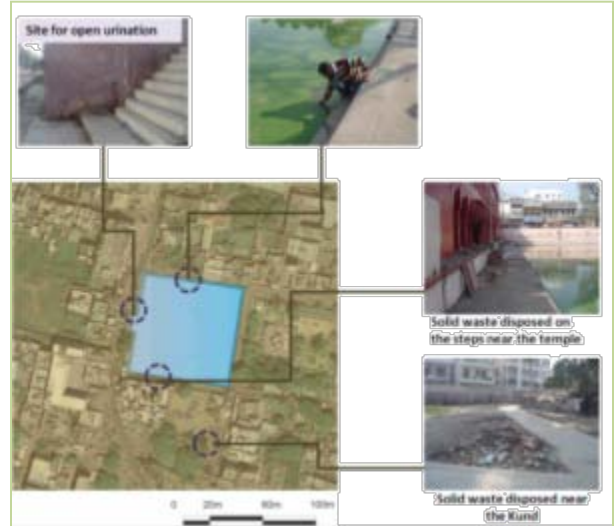


Kashi Parivartan Proposals



Key Proposal : Visible Pilot Interventions

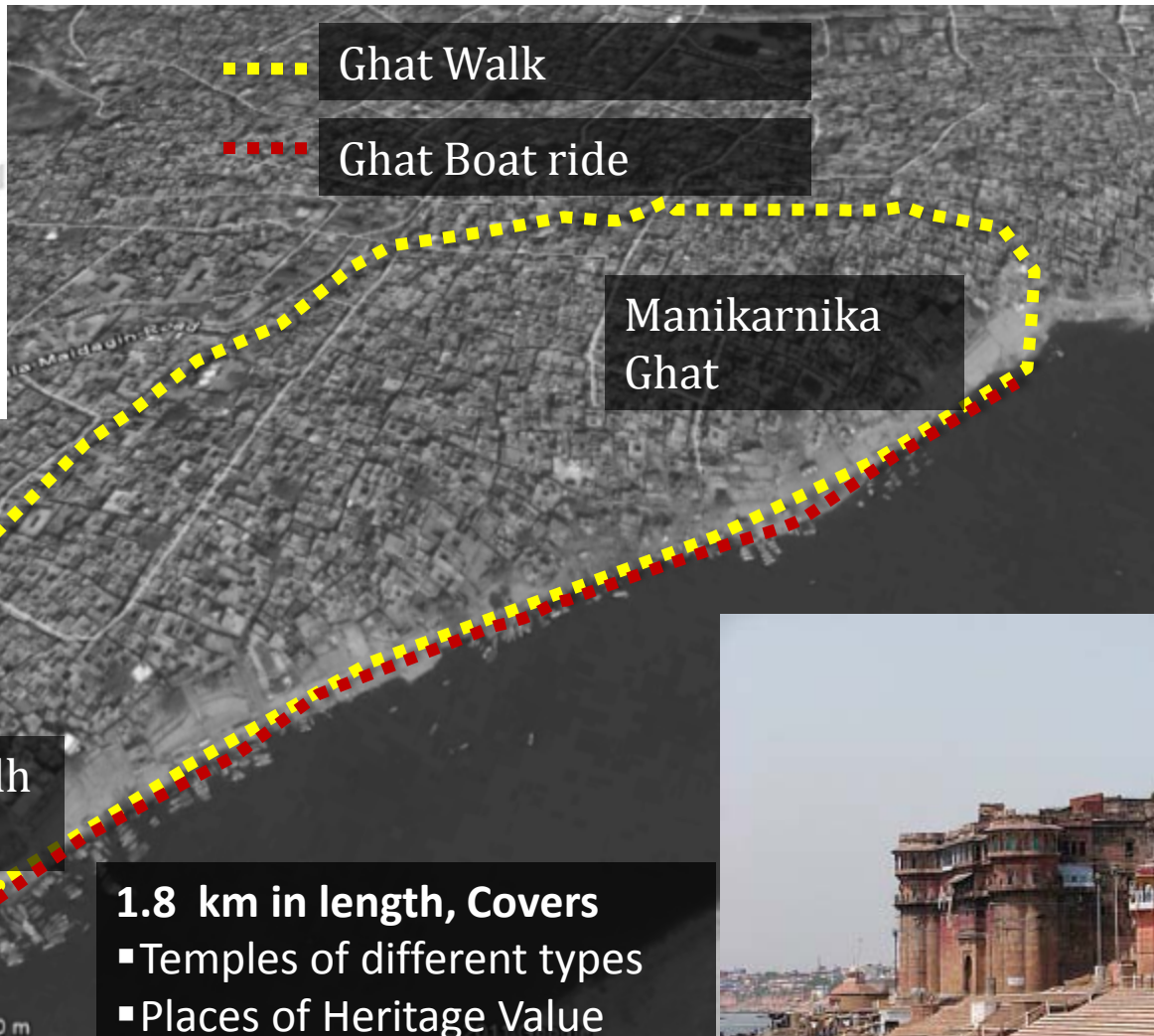
- Areas Prone to Open Defecation**
 - Near Railway Station,
 - Ghats,
 - Along River Varuna and Assi Nalla,
 - Railway Tracks along Sackar Talav
- City Roads Prone to Open Urination**
 - Vidhyapeeth Road
 - Bus Stand Road
 - All major city roads
- Major Tourist Sites**
 - Dashashwamedh to Gadauliya
 - Kashi vishwanath Temple
 - Durga temple
- Major Kunds**
 - Pishach mochan
 - Durga Kund
 - Laxmi Kund
 - Pushkar Talab
- Major Ghats Stretches-**
 - From Harishchandra Ghat to Manikarnik



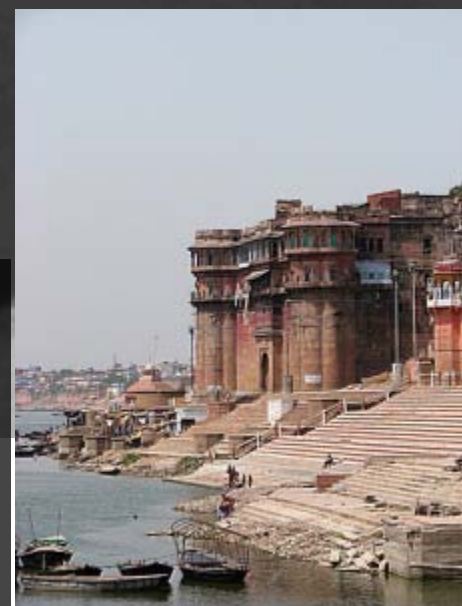
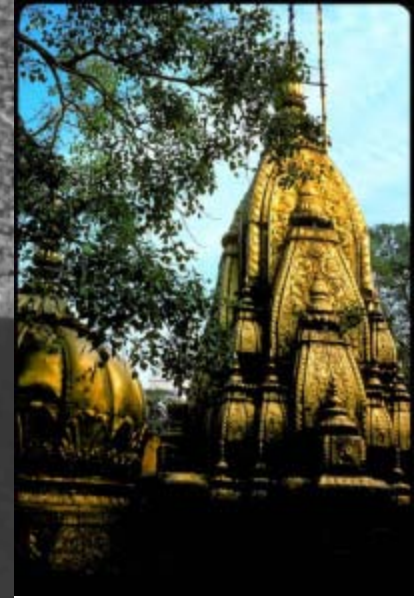
Kashi Parivartan Centre – Mainstreaming CSP

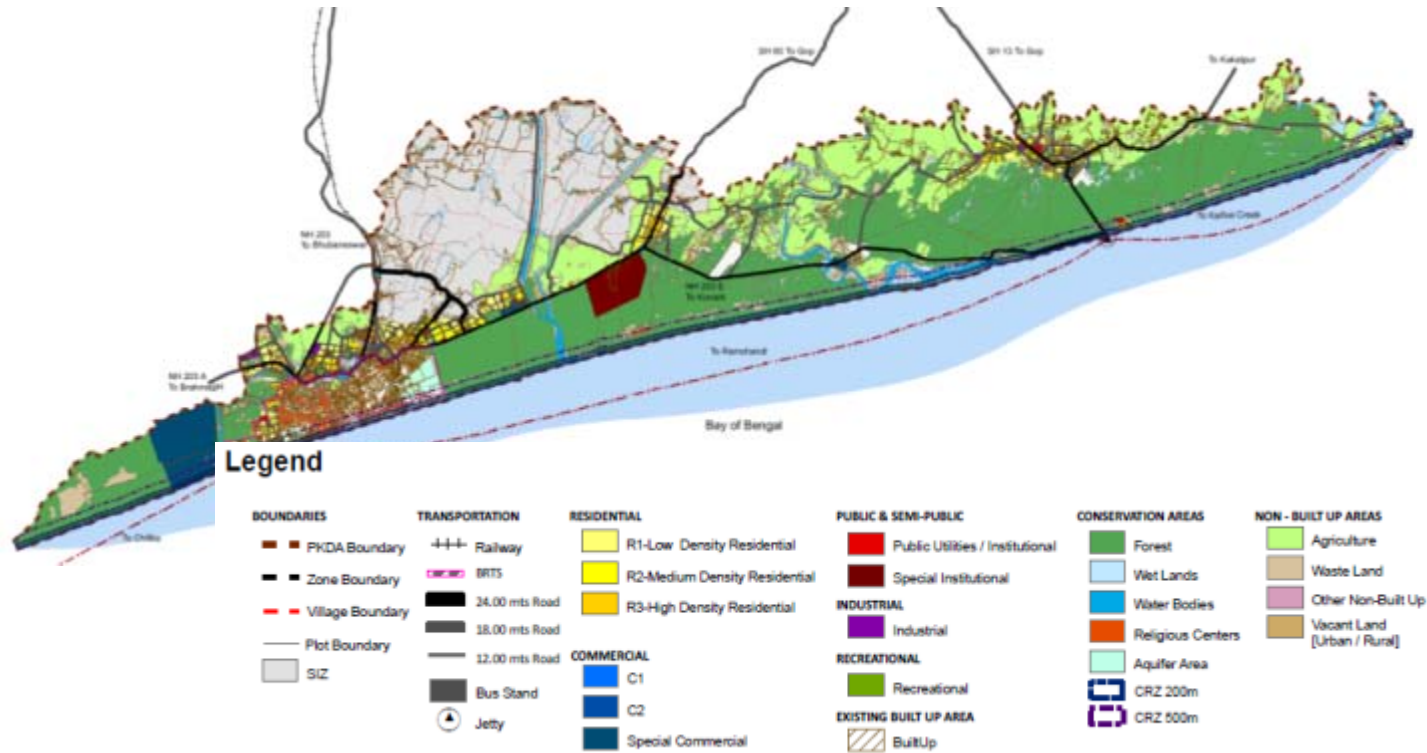


Pilot Proposals - Linking CSP with Ghat Heritage Walk



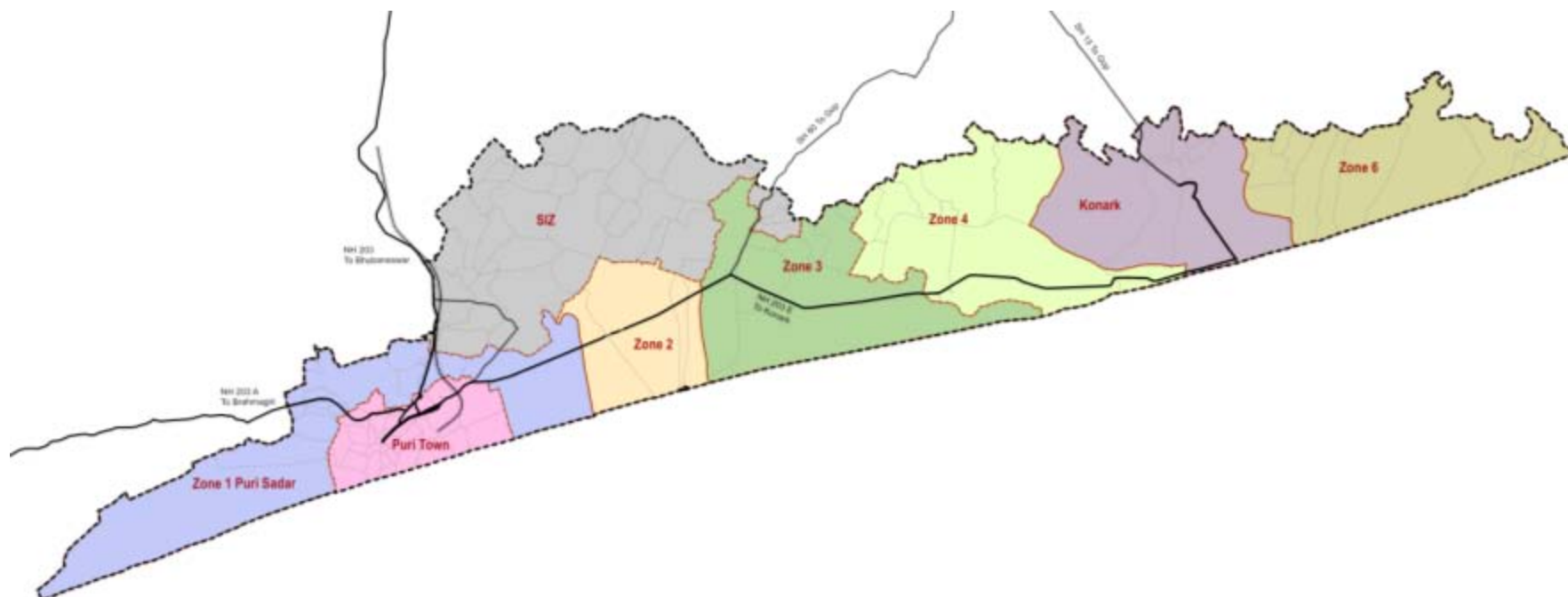
- 1.8 km in length, Covers**
- Temples of different types
 - Places of Heritage Value
 - Ghats for different purposes
 - Eidgah
 - Food bazaars





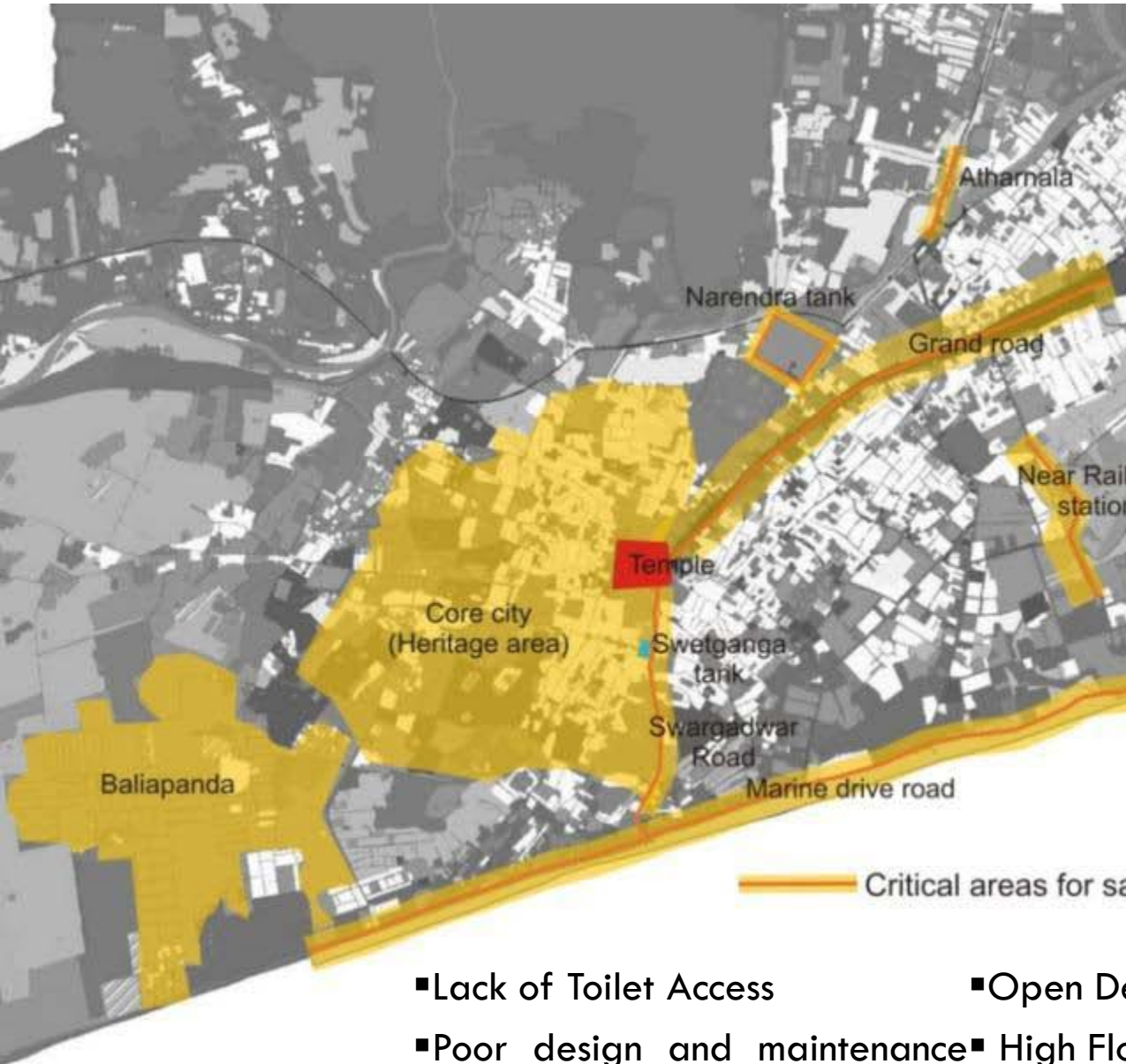
Puri Konark Development Authority Area (PKDA), Odhisa

PKDA



Name of Zone	Location	Area (in Ha)	Percentage area of PKDA	Population	Percentage population of PKDA
Zone 1 - Puri Sadar	Puri Sadar	4781.51	20%	14880	7%
Puri Town	Puri	1629	7%	157837	74%
Zone 2 - Block A	Block A	2087.54	9%	1667	1%
Zone 3 - Block A		3933.14	17%	6381	3%
Zone 4 - Block A		4029.65	17%	9190	4%
Zone 5 - Konark	Konark	3493.59	15%	16979	8%
Zone 6 - Block B	Block B	3436	15%	6872	3%
	Total	23390.43		213806	

Sanitation Hotspots



▪Lack of Toilet Access

▪Open Defecation and Urination

▪Poor design and maintenance of the existing stock

▪ High Floating Population

Solid Waste Management

- Sanitary workers restrict themselves to sweeping of streets and cleaning of drains. However only major roads are cleaned daily.
- Waste is dumped along major drains and water bodies posing a severe health hazard and rendering the Puri town un-aesthetic.



Provision of Sanitation Infrastructure in CDP and Local Area Plans



1 Land for Public Toilet Infrastructure

1 Options for MSW Landfill Site

Access to Toilets- Attractive Design & PPP



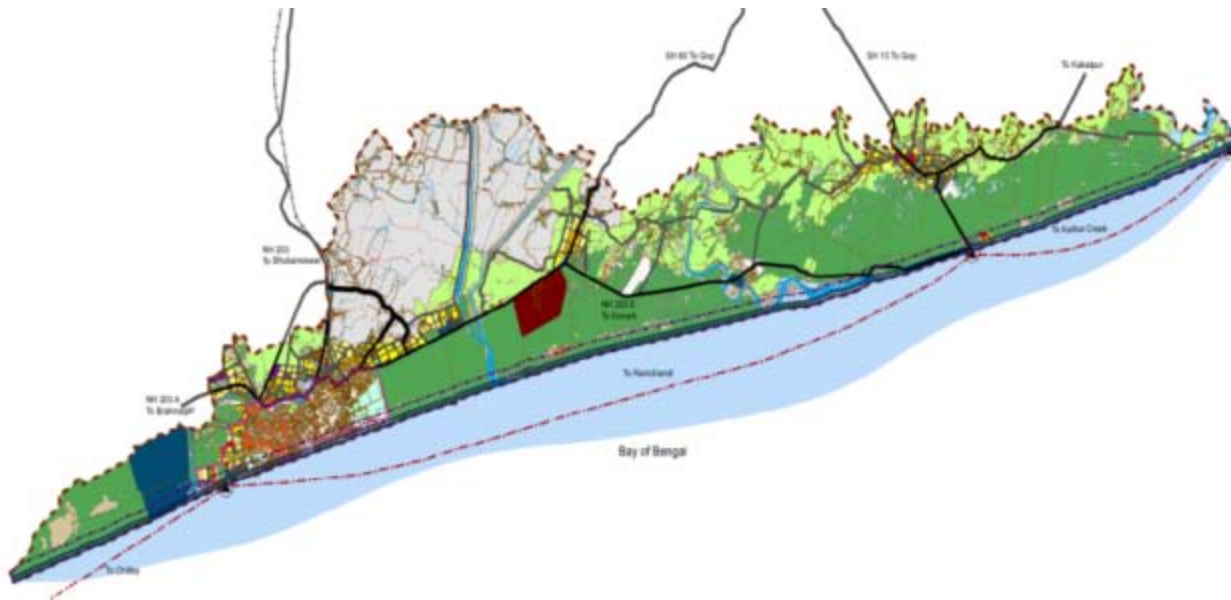
- Building footprint - 151 sq m
- 5 bathing + 5 toilets each
- Special Design Concerns for community toilets
 - Lighted in the night
 - Not farther than 100m from the farthest house
 - Public awareness for water conservation
 - Monthly user card system
 - Spill over areas

Some Thoughts

Integrating City Sanitation Plan and City Development Plan/Strategy

Linking CSP with City Development Strategy

- City wide development of ponds, kunds etc.
- Linking with Schools, Institutions, Temples and other major development projects
- Provision of Land for City Sanitation Infrastructure



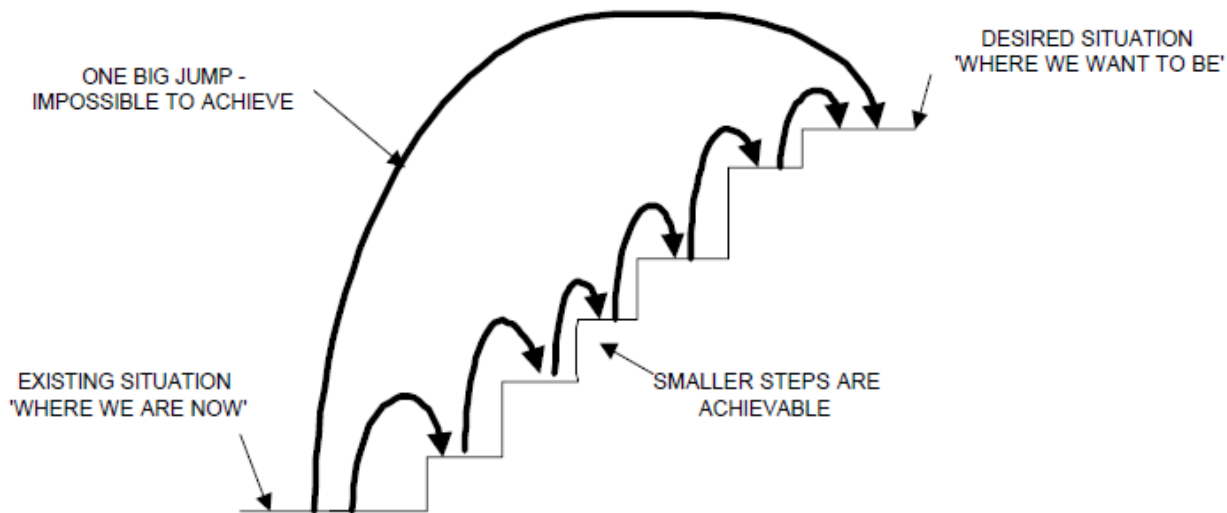
Planning for Smart Goals

Avoiding overambitious targets

Short Term – Cost effective and visible interventions

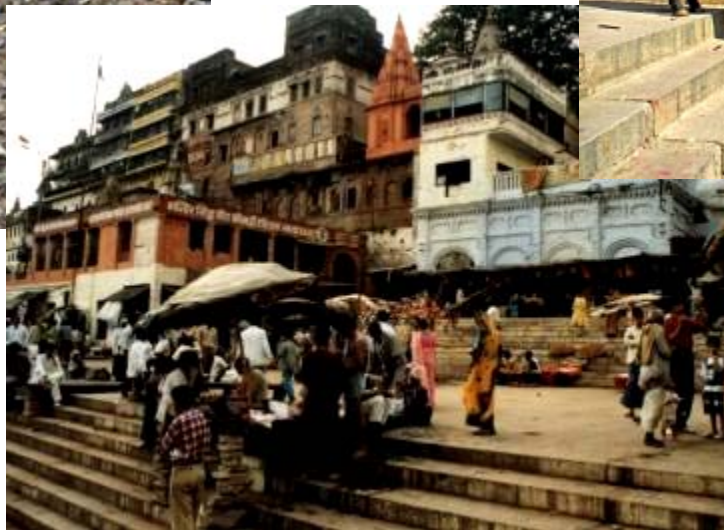
Medium Term – Strengthening present systems to increase efficiency

Long Term – Development of Infrastructure



Focus on Special Areas, Zones

Special areas like Ghats, Kunds would require special attention and specific interventions.



Some thoughts- Urban Capacity Development

**Initial Focus on Urban Planning and Management Capacity
Development rather than a specific sector**

Long Term Handholding Support and Help Desk

**Urban Partnerships- Engagement with Local University /Resource
Institutions**

Thank You
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