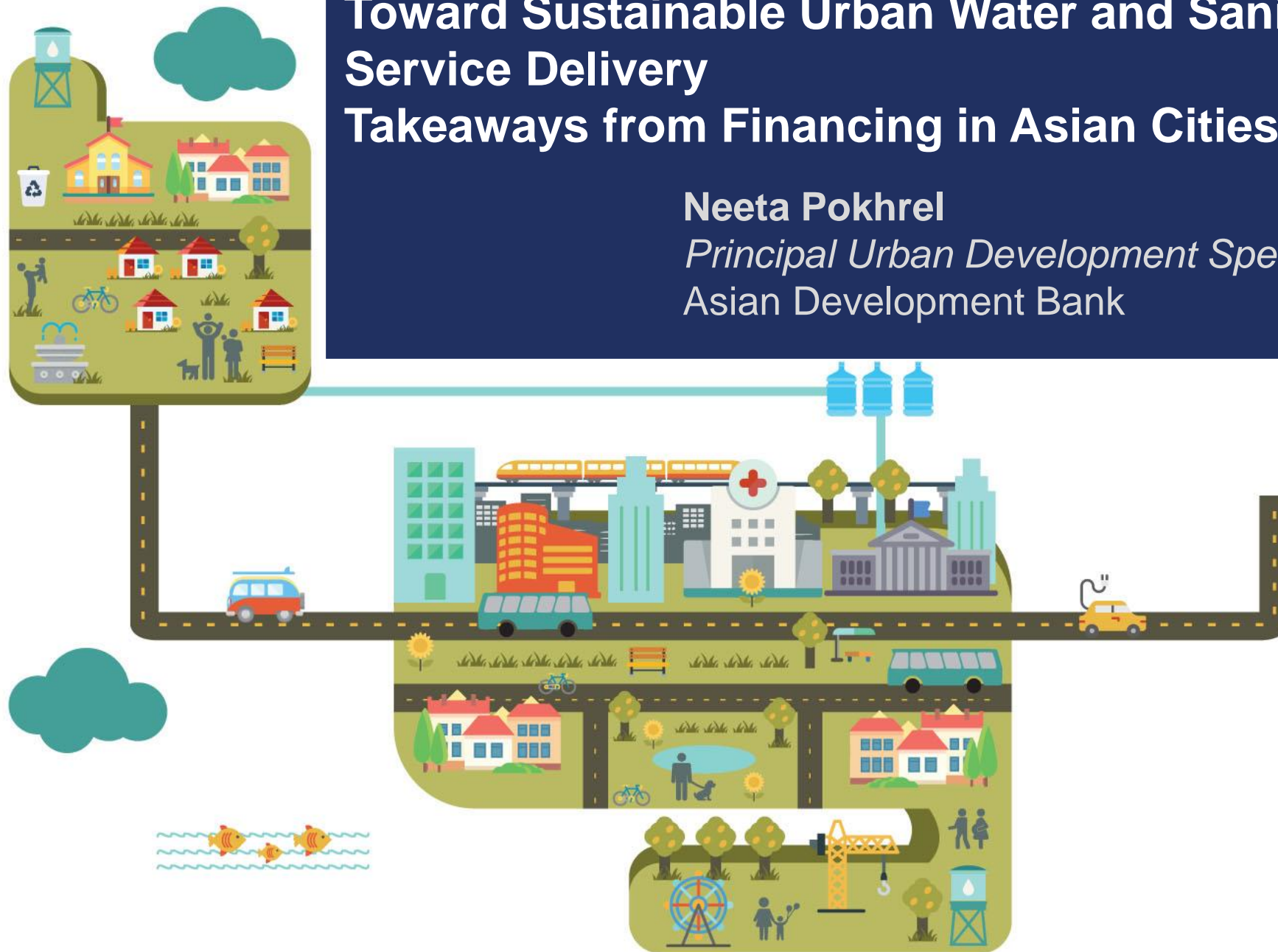


Toward Sustainable Urban Water and Sanitation Service Delivery

Takeaways from Financing in Asian Cities

Neeta Pokhrel

Principal Urban Development Specialist
Asian Development Bank

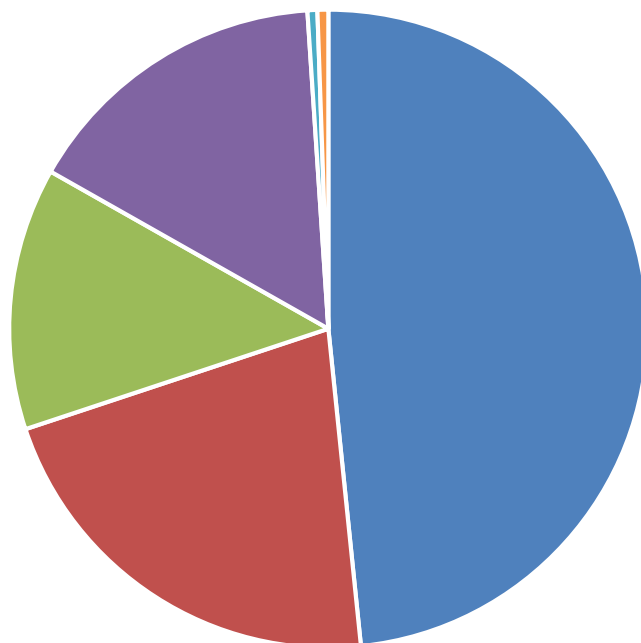


ADB

South Asia Urban and Water Portfolio ~ \$6385m (30 Nov 2018)

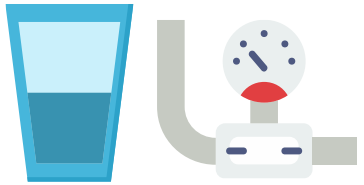
Over 80% in water and sanitation

Active Portfolio (\$ million)



■ India ■ Bangladesh ■ Sri Lanka ■ Nepal ■ Bhutan ■ Maldives

ADB financing covers



**Water supply support
including source to taps or
specialized NRW reduction**



**City-wide sewerage, drainage,
sanitation, including SWM**



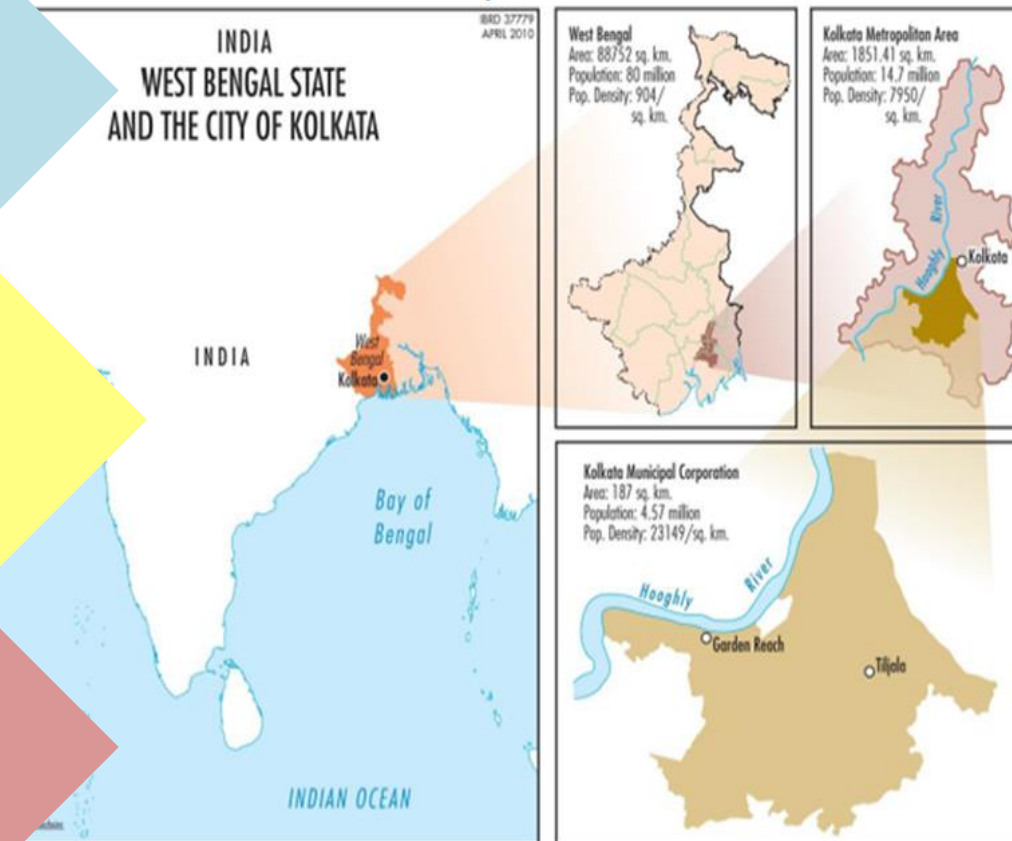
**Financing includes all aspects
for sustainable service delivery—
revenue improvement through
financial management, tax
reforms and tariffs, institutional
and utility strengthening**

Kolkata (INDIA) Example

Capital city of 4th most populous state (West Bengal) & 6th largest GDP contributor in India

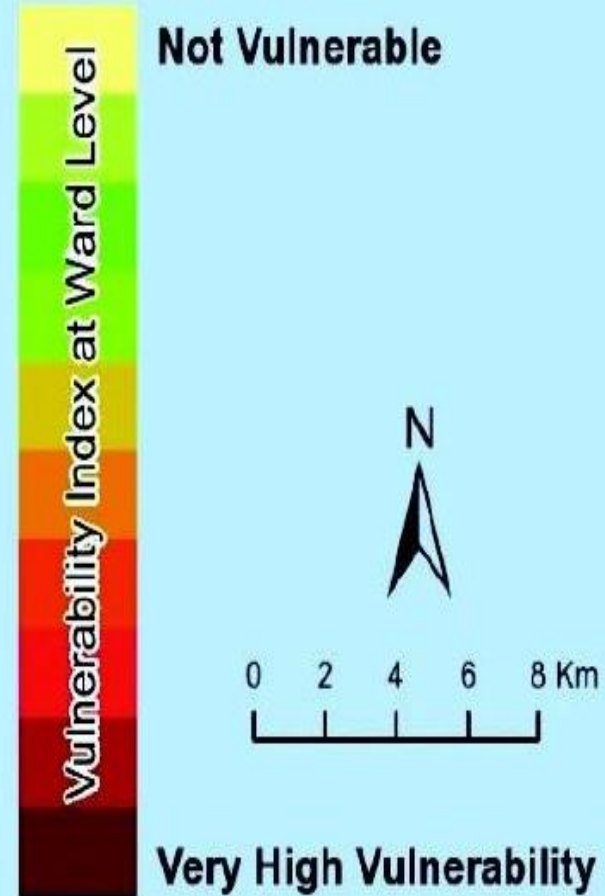
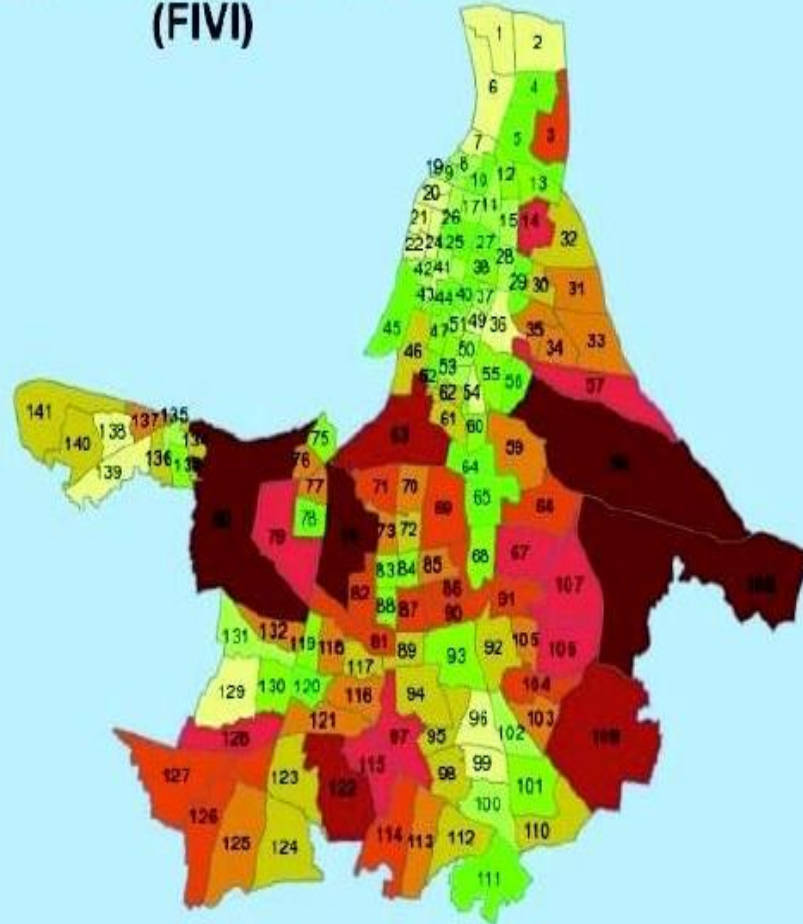
Over 5 m permanent & over 3m floating population, with density 24,250 people per sq. km

Highly vulnerable to natural disasters - flooding, earthquake and cyclones



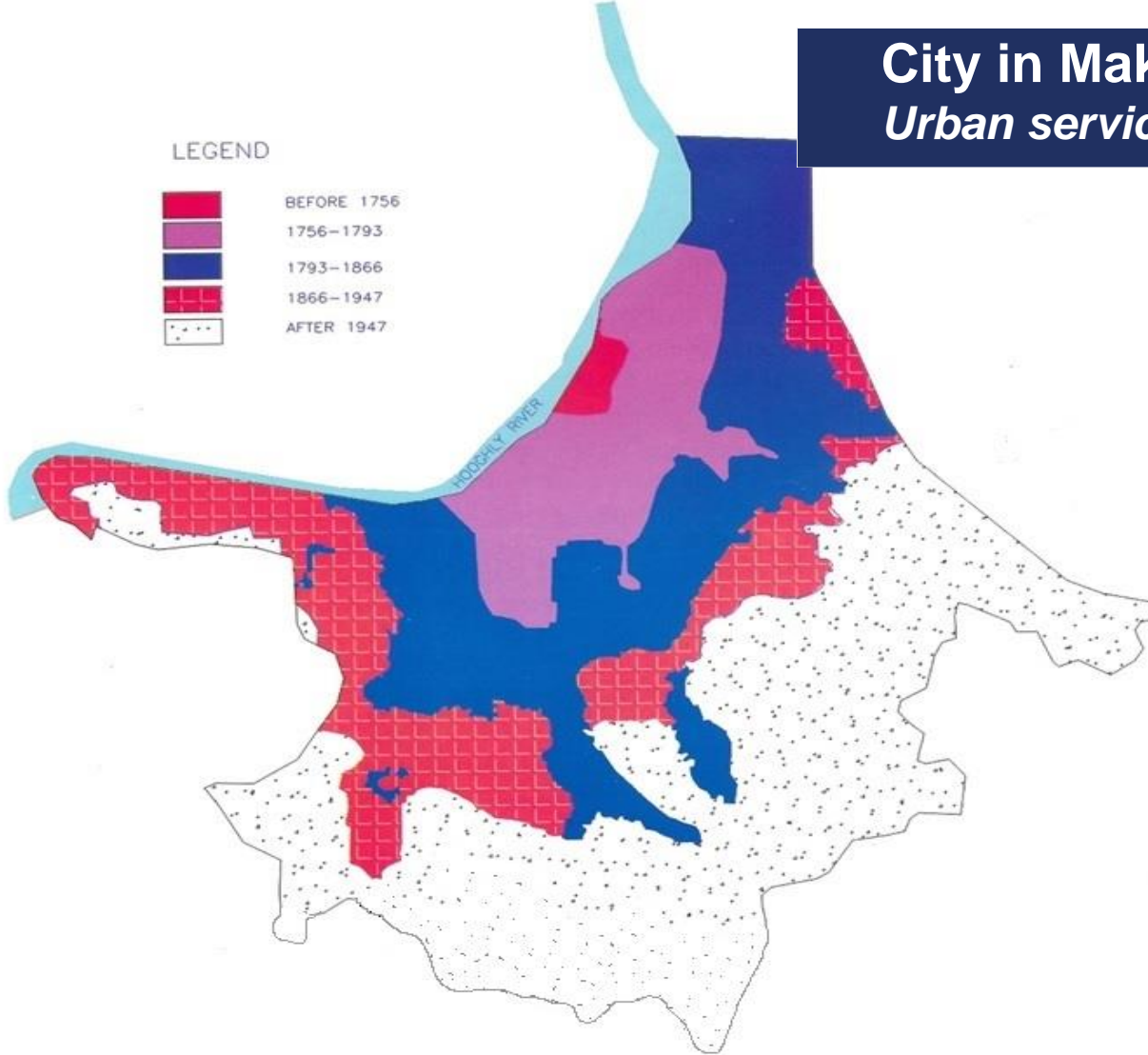
Ranked among top ten costal cities highly vulnerable to flooding and impacts of climate change

**Flood Vulnerability Index
(FVI)**

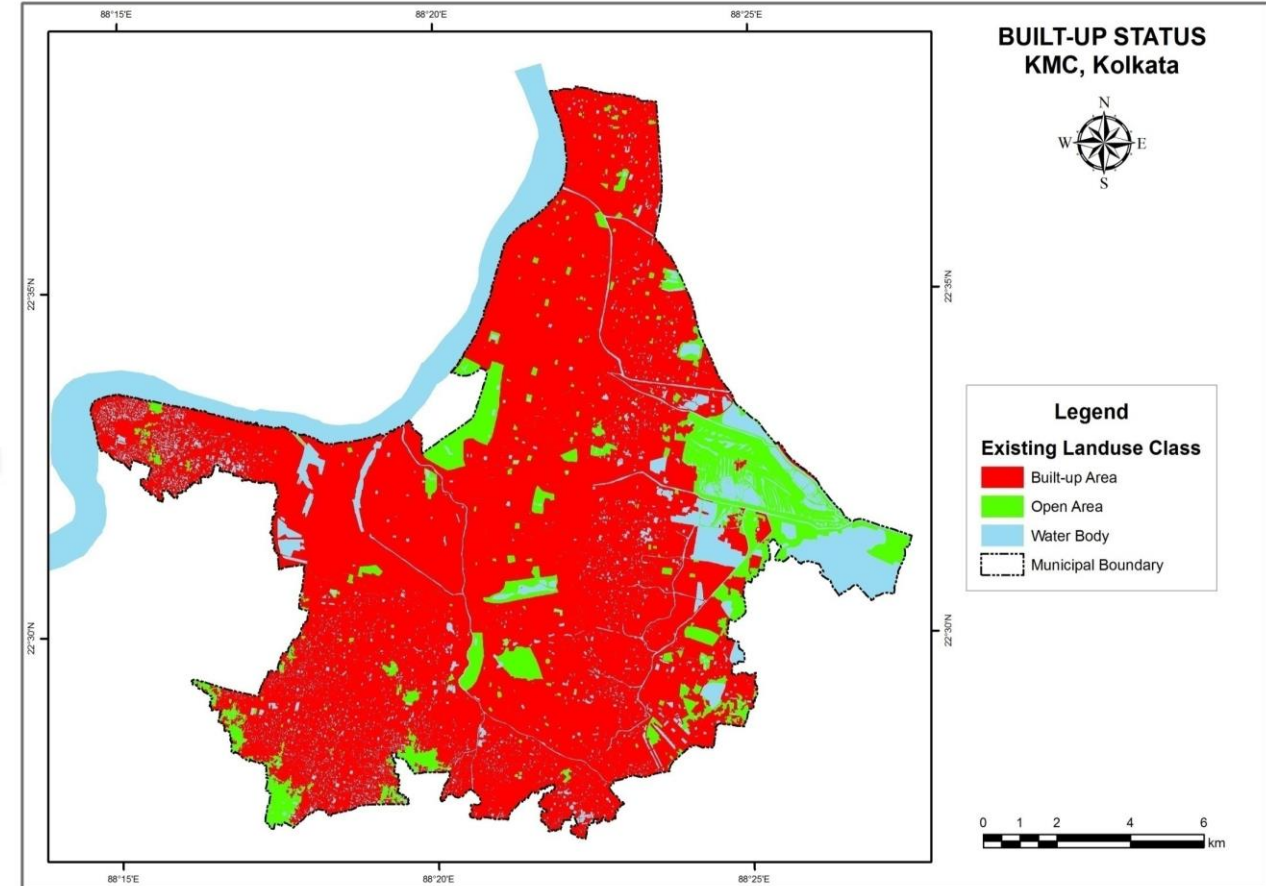


City in Making Over 300 Years

Urban services not keeping pace!



Kolkata city: 1756- 1947



Kolkata city: 2008

ADB's Support to KMC – A two-decade partnership so far and continuing!

1998

- Technical assistance grants for accounting reforms and project preparation

2000

- Kolkata Environment Improvement Project (KEIP) (\$250 million)

2007

- Supplementary Loan to KEIP (\$80 million)

2014

- Multi tranche financing facility for Kolkata Environment Improvement Investment Program (KEIIP) (\$400m), Tr 1 (\$100m)

2016

- Tranche 2 of KEIIP (\$200m)

2018

- Tranche 3 of KEIIP (\$100m)

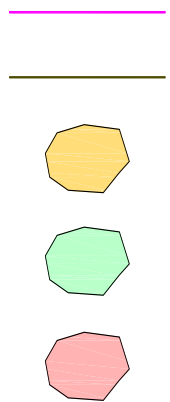
2020

- Proposed Kolkata Urban Resilience Improvement Project

ADB support for universal sanitation



LEGEND:-



BOROUGH BOUNDARY

WARD BOUNDARY

CORE AREA COVERED PRIOR TO KEIP

AREA COVERED UNDER KEIP

AREA COVERED UNDER KEIP

Rehabilitated STP (57 MLD)

Rehabilitated STP (45 MLD)

Rehabilitated STP (52 MLD)

3 new STPs

Comprehensive SWM Masterplan with to reduce, reuse and recycle (4000 MT/day) & detailed design for investment

100% S&D coverage with current and future funding

ADB




ADB support for universal water supply

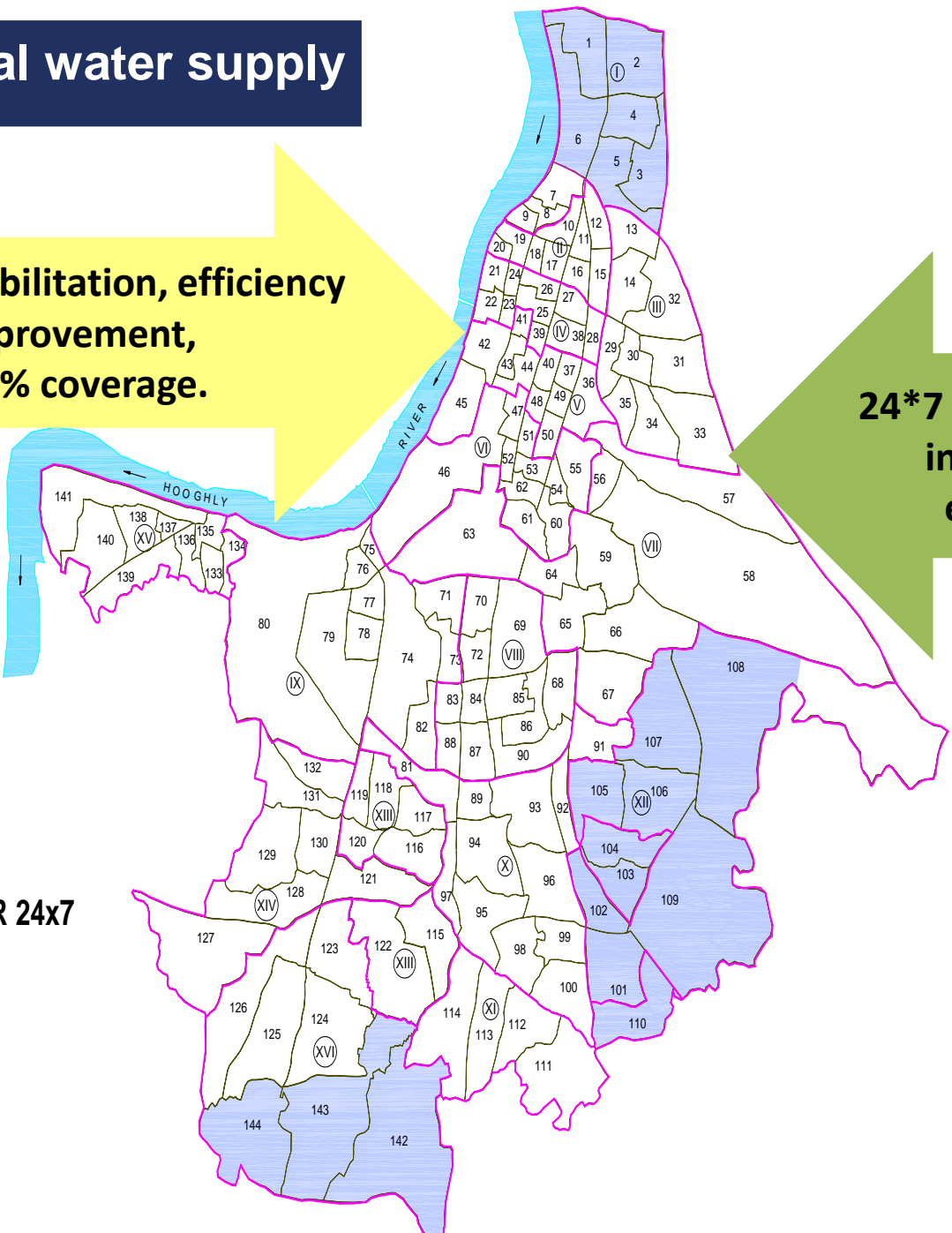


Assets rehabilitation, efficiency improvement, 100% coverage.

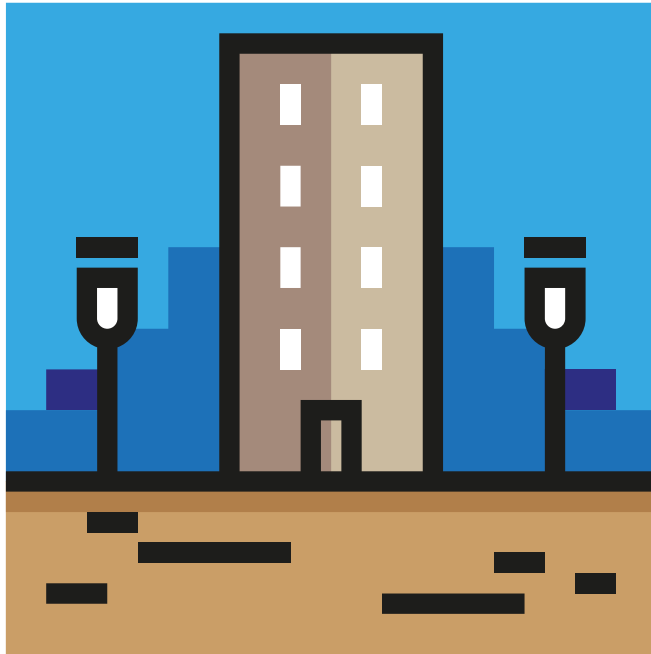
24*7 water supply and metering in three pilot areas, then extending throughout.

LEGEND:-

-  **BOROUGH BOUNDARY**
-  **WARD BOUNDARY**
-  **AREAS COVERED UNDER 24x7 WATER SUPPLY**



**Takeaways: There are no short-cuts!
Government leadership for creating enabling environment essential!**



**Hydraulic modelling
for comprehensive
sewerage and
drainage masterplan**

**SCADA systems
and instrumentation
across the city**

**Digitization of
maintenance depots
and customer
services**

**Flood Forecasting
and Early Warning
System**

Takeaways continued: Creating enabling environment Modernizing and digitizing systems



Upgrading financial
management and
administrative
systems

Utilizing geo-spatial
technology for asset
management and
service to citizens

Modernizing city's
payroll and citizen
payment system, web-
based citizen's
interface

Property tax reforms,
online taxes and
public utility bills
payment

CRISIL reaffirms “CCR A+/ Stable” rating to KMC in October 2017
It's a long journey from never having KMC's books audited before engagement

Small Towns Water Supply and Sanitation Project (NEPAL)

Cost sharing and operations by the community

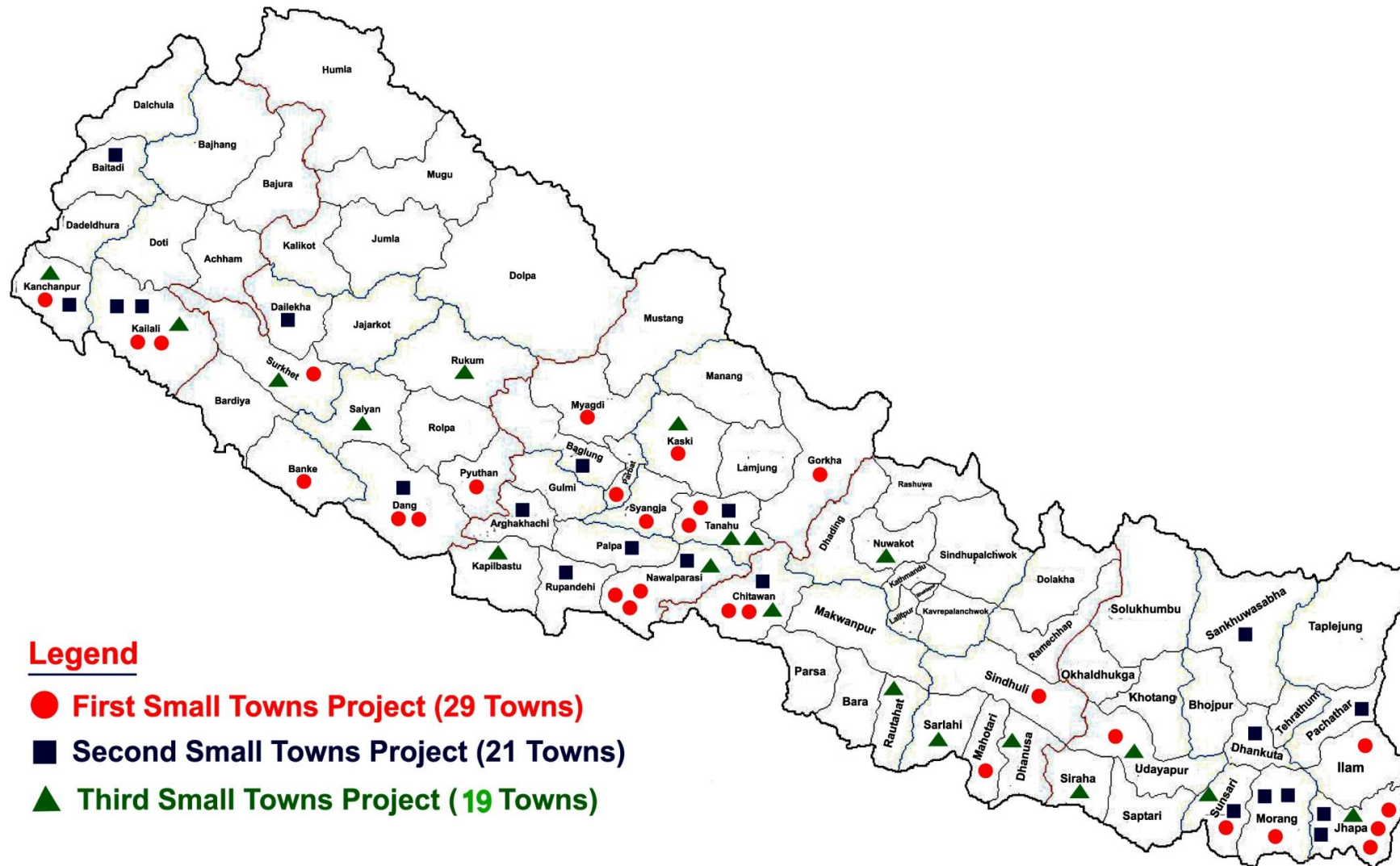
Achieving over 98% cost recovery
in all towns

Communities share 30-50% of
capital costs of water supply and
15% for sanitation

A demand-driven and bottom-up
approach



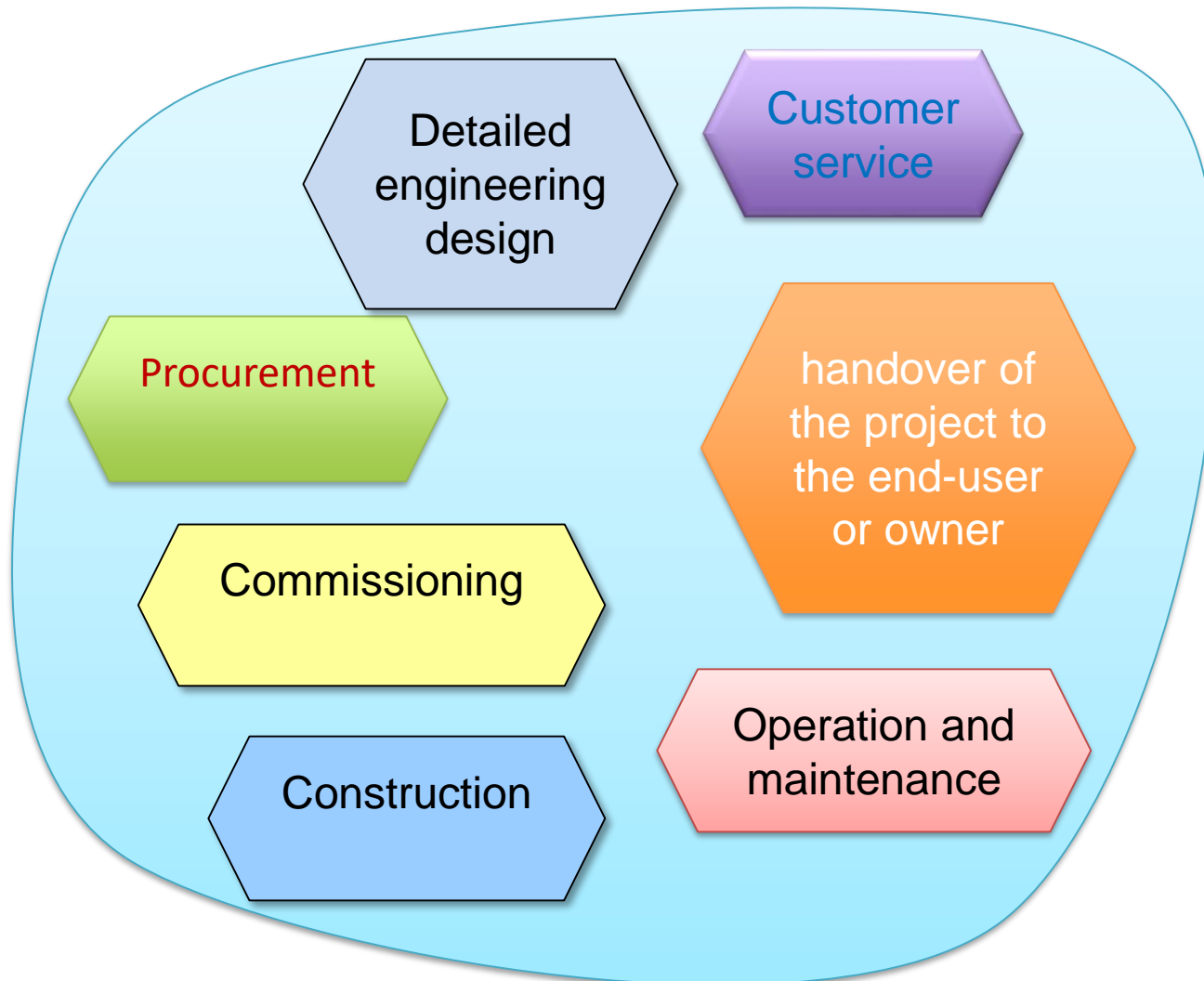
NEPAL SMALL TOWNS WATER SUPPLY & SANITATION SECTOR PROJECT



Average performance achieved by the towns

- Supplying 13 hours/day with some providing 24/7
- Recovering O&M, debt service, and expansion costs
- NRW at 21.6%, some lower than 5%
- Tariff collection efficiency at over 80%
- Metered connections at 98% on average

Takeaways: Government providing enabling environment, policy framework, oversight, and regulations key to success!



Consider alternative contracting modalities – DBOs, performance- based contracts

Collate baseline data and prepare master plan

Provide enabling environment for financing