How did the East Asian 'Tigers' deliver sanitation within a generation?
Lessons for the SDGs

Henry Northover
10 November 2015
BORDA Symposium

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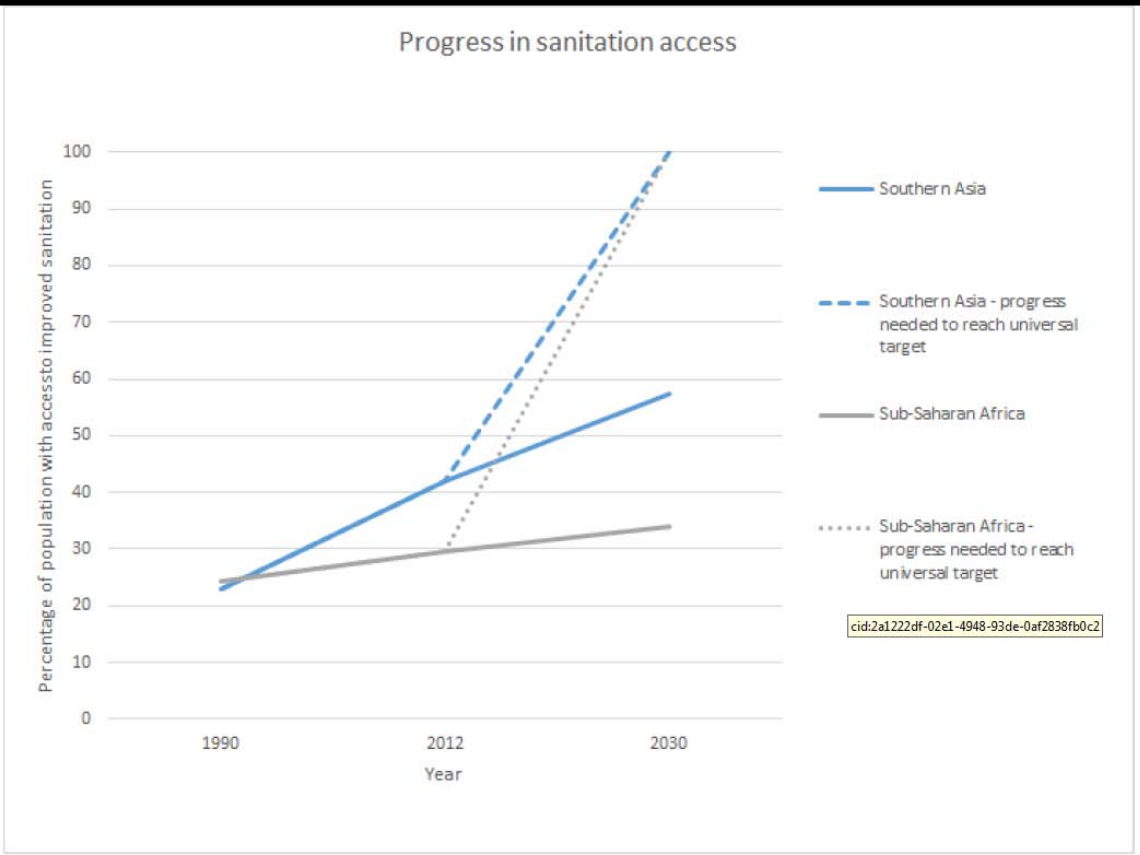
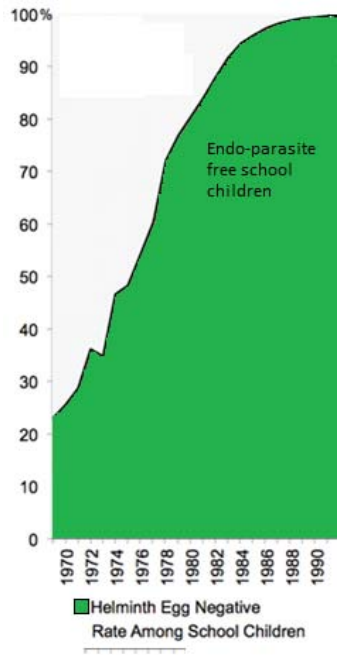


Source: Calculated from WHO/Unicef Joint Monitoring Programme for Water Supply and Sanitation
www.wssinfo.org

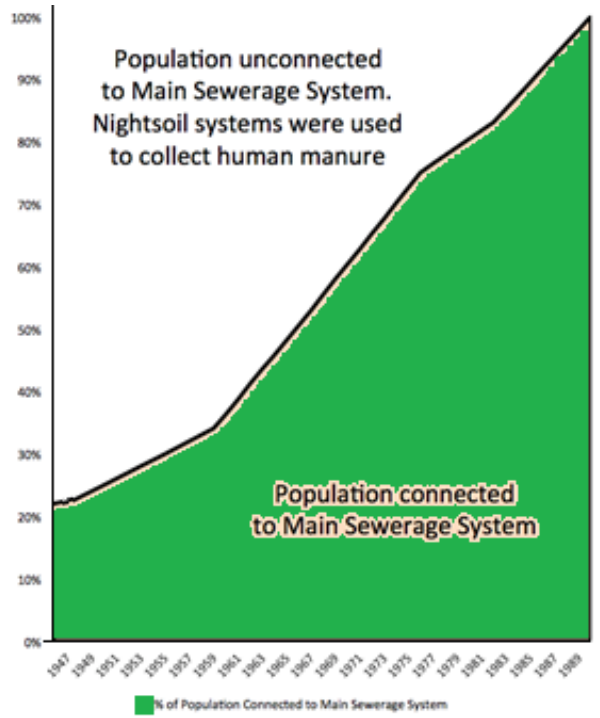
Has this ever happened before?

S. Korea



1970 ---------- 1990

Singapore



1947 ---------- 1983

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The research

- Mapping legislative and institutional change
- Media archives
- Key informant interviews

Challenges:

- Investigating past events
- Shortage of data to triangulate findings
- Atypical historical contexts

Threshold of GDP was not a precursor to the sanitation drive:

Country	GDP per capita in 1960 (in USD)	National improved sanitation coverage rate in 2000
South Korea	$155	100%
Ghana	$183	10%
Liberia	$170	12%
Senegal	$249	43%
Zambia	$227	41%
Zimbabwe	$280	40%

Source: World Bank and UNICEF/WHO

The Political Narrative

Total sanitation coverage as part of a wider narrative around notions of:

- **Common wellbeing**
- **Modernity**
- **Nation-building**

Leadership is critical

High-level leadership:

Championing:

- Hygiene, Public Health and Cleanliness as ‘modernity’

Progress-chasing:

- **Course correction** - cyclicality of monitoring and reform

“Let’s Try To Live Well”
- President Park

Integrated Approach

A well coordinated multi-sector approach was a necessary condition for rapid sanitation improvements

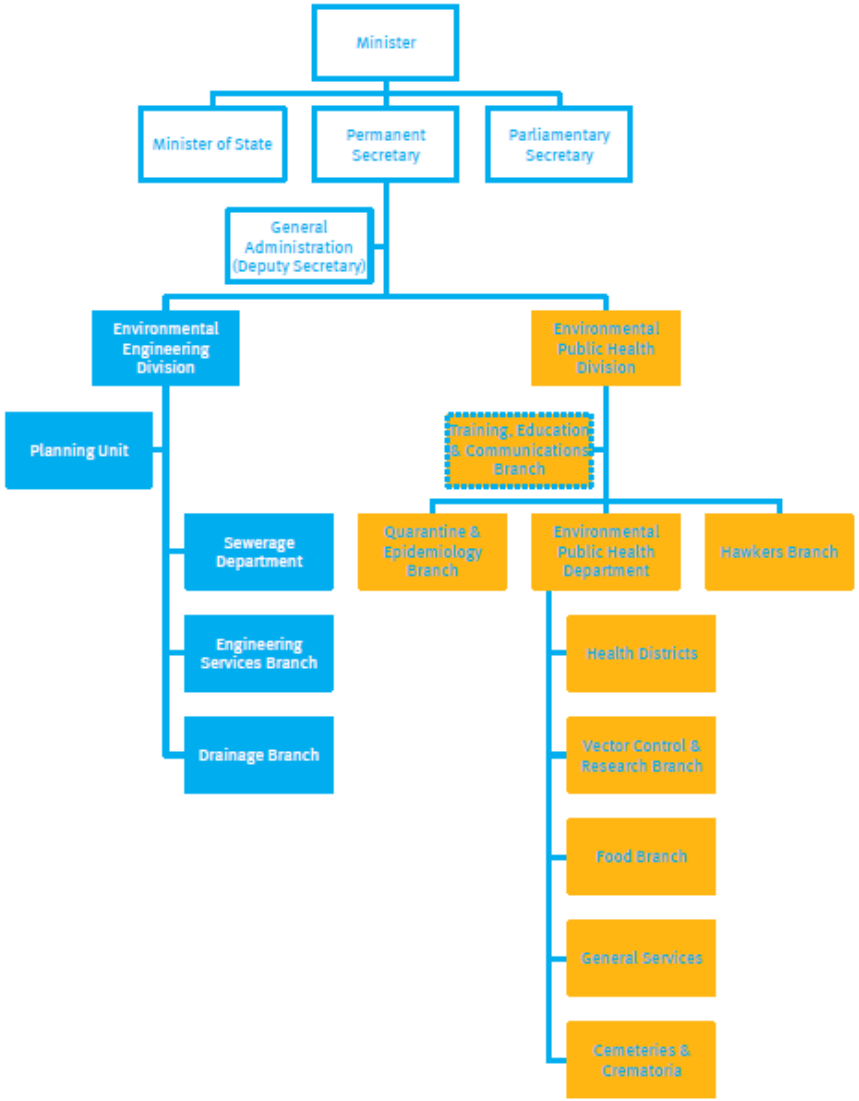
- Housing
- Education
- Health

Administrative *form* follows implementation *function*

Improvements did not wait for capacity development.

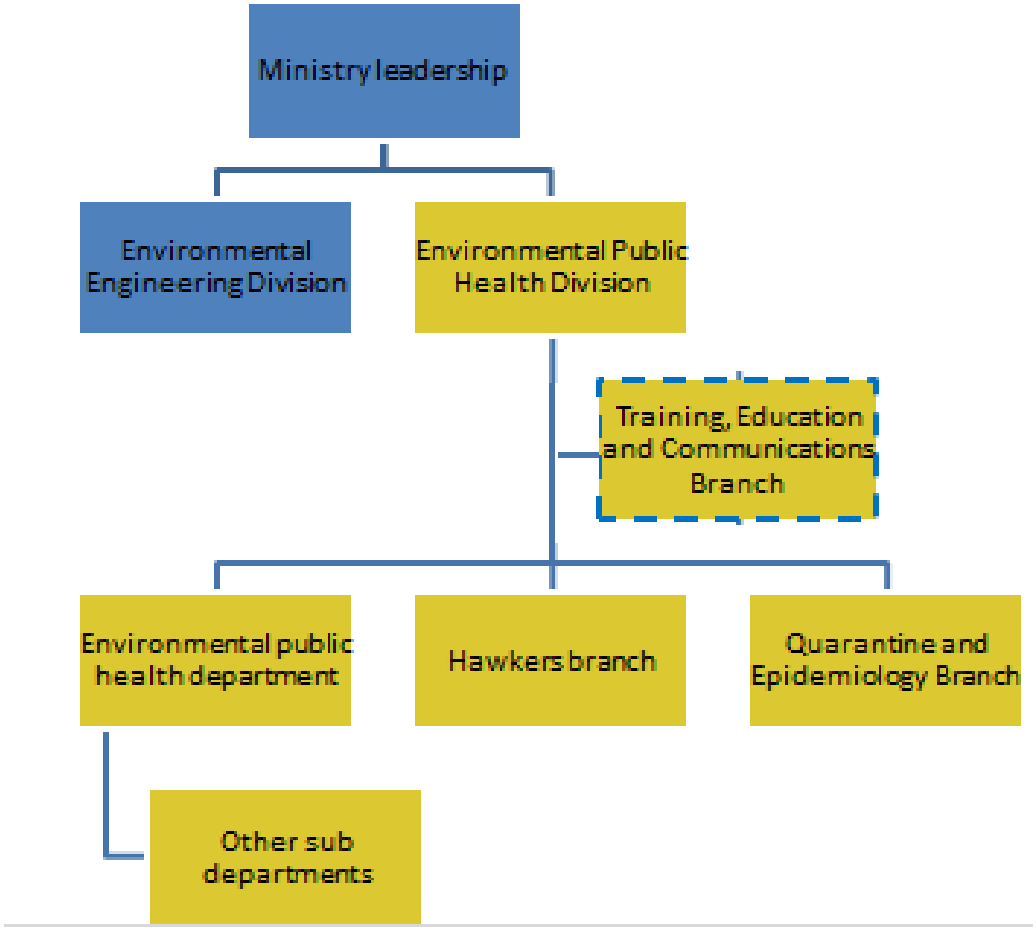
The growth of the sector's capability happened *alongside* efforts to make progress in sanitation coverage.

Figure 1: Original organisational structure of Singapore's Ministry of Environment



Source: Ministry of Environment (1972) *Annual report*. Singapore: Ministry of Environment

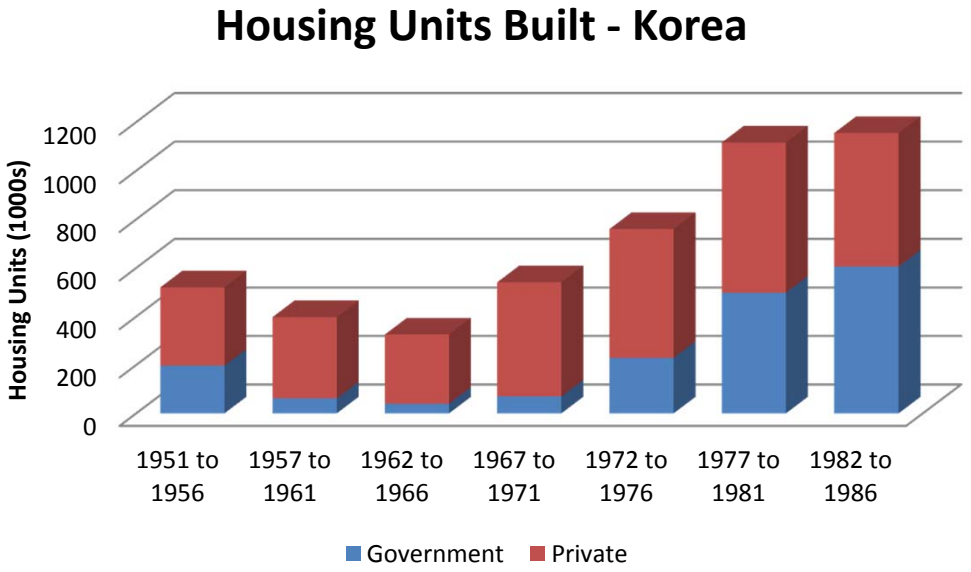
Form follows function…



Singapore:
In 1960, only 9 per cent of Singaporeans lived in government flats.

Government flats house about 82 per cent of Singaporeans today

S. Korea:
Government investment in housing steadily increased in number and as a percentage, while private investment also increased but at a slower rate



Singapore education campaigns

	Korea Education Law
Article 2	"Develop the necessary knowledge and habits for physical health development and maintenance to possess indomitable vigor."

Close outcome monitoring

- S. Korea schools systematically **monitored parasite infection**

- Competitive element of NVM required monitoring of performance of villages – **monitoring was used** for resource allocation

- Singapore, HDB **annual reports** highlight successes and challenges in delivery, and cholera outbreak and management information

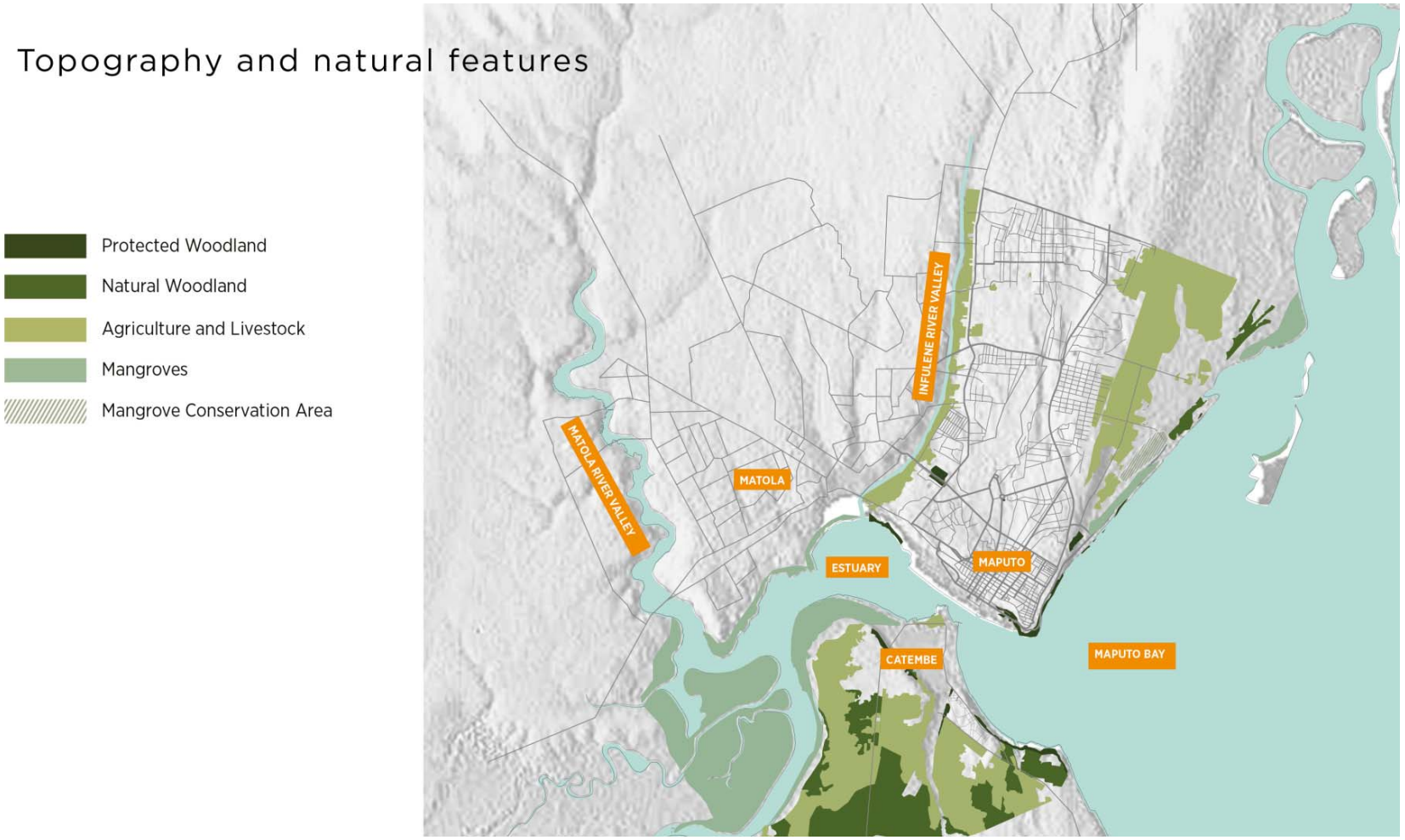
- Malaysia – local level inter-sectoral *Operations Rooms.* Mid-wifery as first base monitoring.

"[Development teams] must also, at least once a week, have what I call 'morning prayers' where all departmental officers get together and instead of writing tedious minutes on files to each other, they settle their departmental differences together, in a coordinated way, in front of the maps in their operations rooms."

Deputy Prime Minister to Persatuan Ekonomi Malaysia, 24 March 1966

City-wide strategies for 2030

Topography and natural features



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City-wide strategies for 2030

The housing (planning) challenge

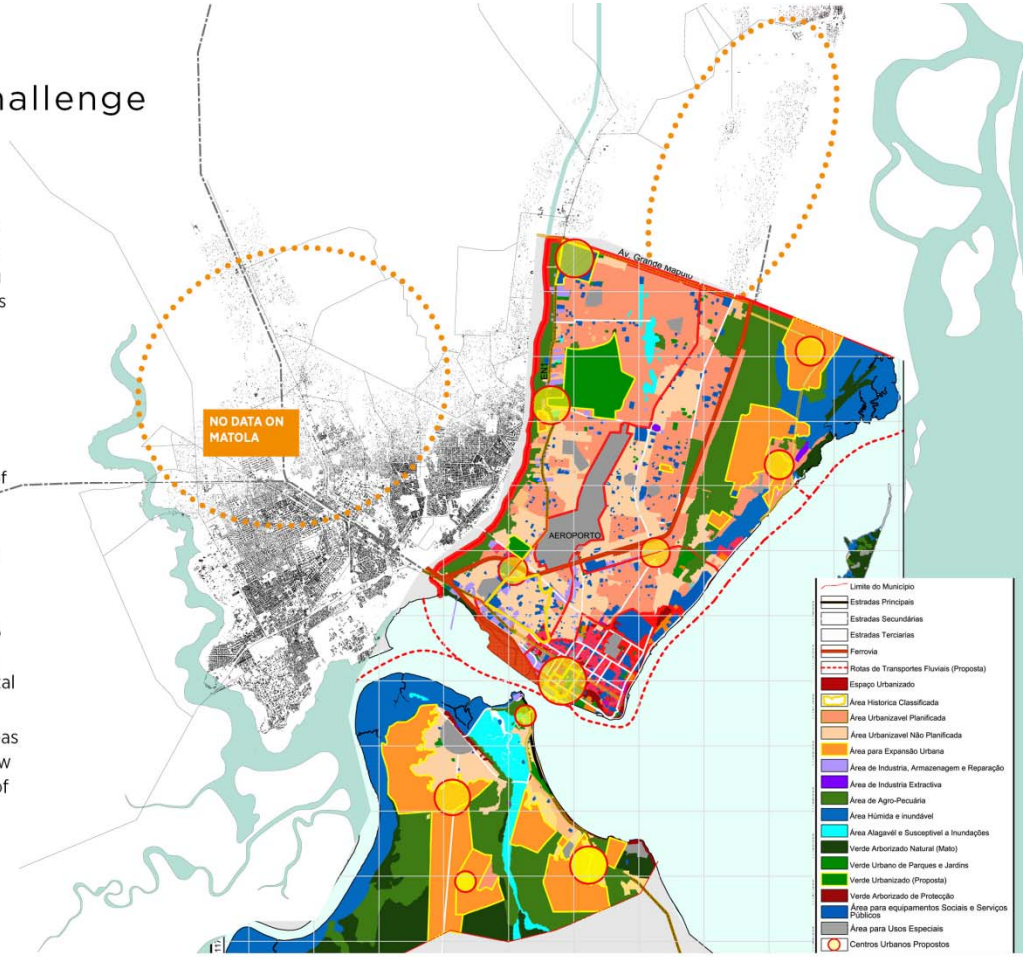
MUNICIPAL DEVELOPMENT PROGRAM

(PROMAPUTO 2007-2016);

- Municipal Development Program: AUS$40 million initiative funded by the World Bank. The main aim is to increase the coverage and quality of municipal services. Urban planning and is a major component of ProMaputo and includes items like zoning plans, land use plans, GIS map development, slum-improvement programmes and land-titling in peri-urban areas.

CITY MASTER PLAN (PEUMM) 2008

- provides the legal and strategic framework for expansion of the city. It includes
- stimulate the densification of existing settlements
- new "multifunction" areas to structure the development of the city and decentralise activities towards multiple urban centres where to prioritize infrastructure investments
- identifies restricted and prohibited areas of construction to support the municipal conservation of ecological reserves, woods, wetlands and floodplains, cultural and environmental heritage
- It recommends early intervention in the new residential areas (Catembe, Costa do Sol, and Zimpeto Mapulene) where new distribution roads should be built before the construction of houses.
- Unplanned settlements will be subject to a Partial Urbanisation Plan and Detailed Plans designed through community participation



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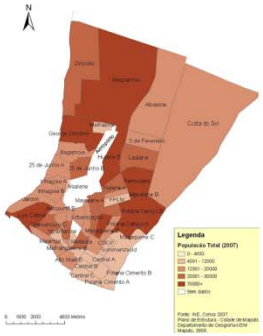
City-wide strategies for 2030

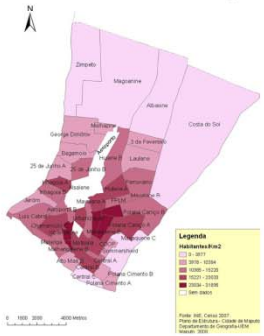
The housing (planning) challenge

- Demographic growth rate Maputo: 1.3 %
- Demographic growth rate Matola: 4.7 %

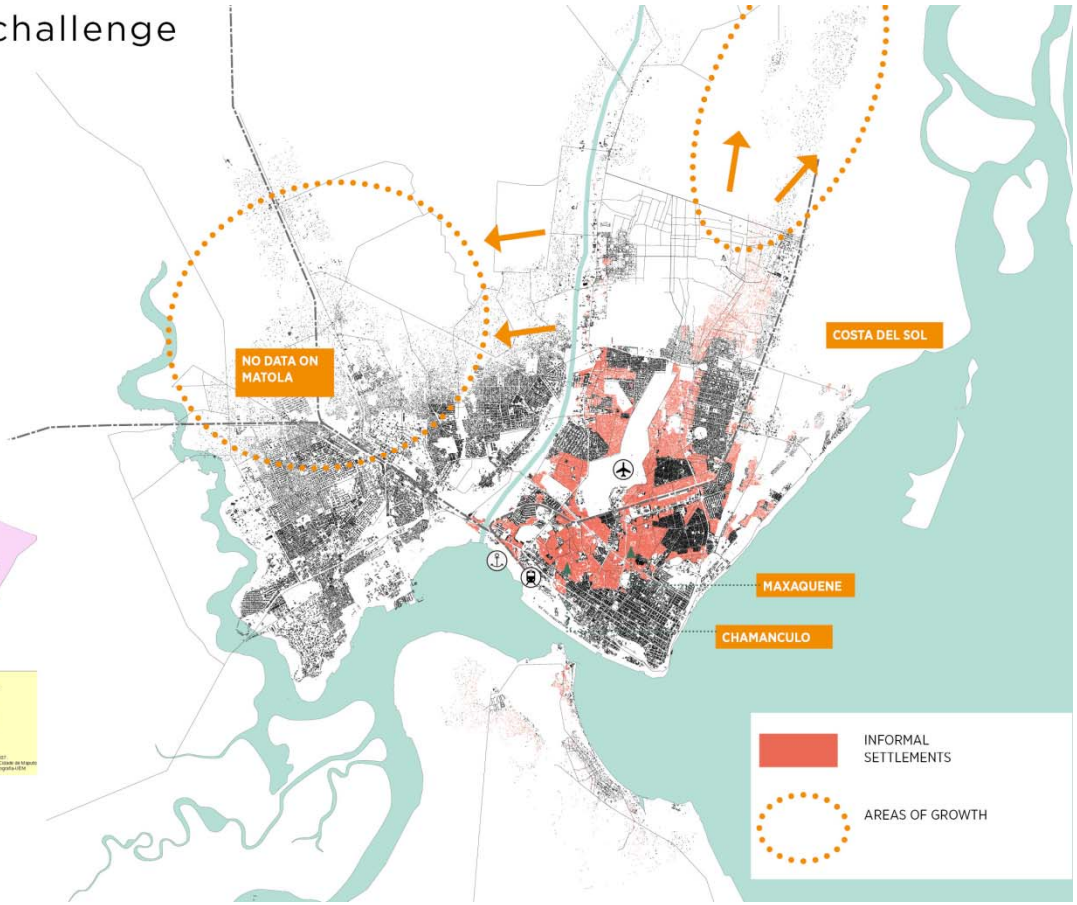
- 40 % of the city area is covered in informal settlements (overcrowing, lacks of basic infrastructure, precarious structure, on vulnerable locations and with informal tenure)



POPULATION DISTRIBUTION



POPULATION DENSITY



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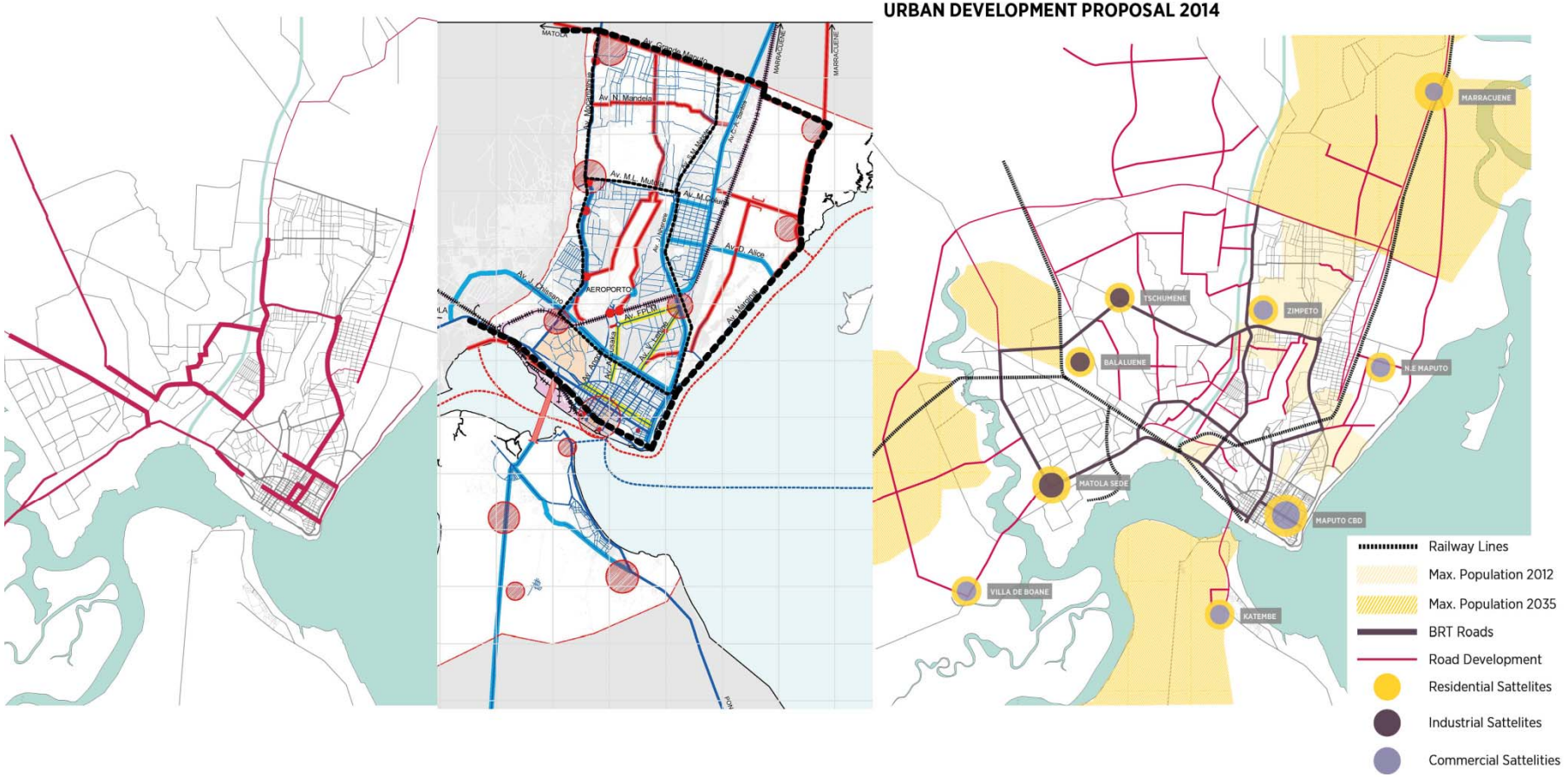
City-wide strategies for 2030

The transport challenge

TRAFFIC INTENSITY TODAY

TRANSPORT PLAN 2008

JICA TRANSPORT AND URBAN DEVELOPMENT PROPOSAL 2014



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City-wide strategies for 2030

The water challenge

- Lack of water supply in particular to low income areas (on 20% of low income areas served in 2008)
- High rate of non revenu water (about 50 %)
- Shallow acquifers are polluted
- Problems of saline intrusion (further compound by climate change)
- Relation with POPs (private providers in peri-urban areas). Bring water to 300000 people.
- Most of the water comes from the Umbeluzi treatment plant. Recent work took the production capacity of Umbeluzi from 186000 m3 to 240 000m3/day.
- Current demand is about 210000m3 predicted to be around 560 000m^3/day in 2035.
- AdRm network coverage is about 35% (with 80 % of the network beinhg in the cement city). Recent efforts to extend the network to peri-urban areas.

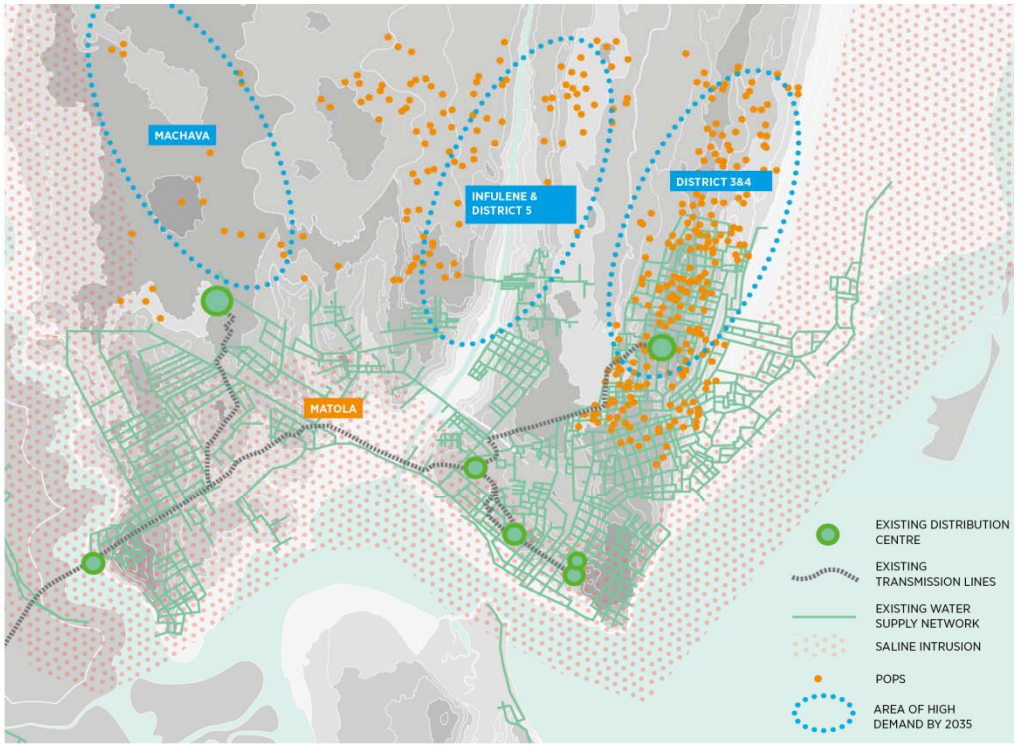
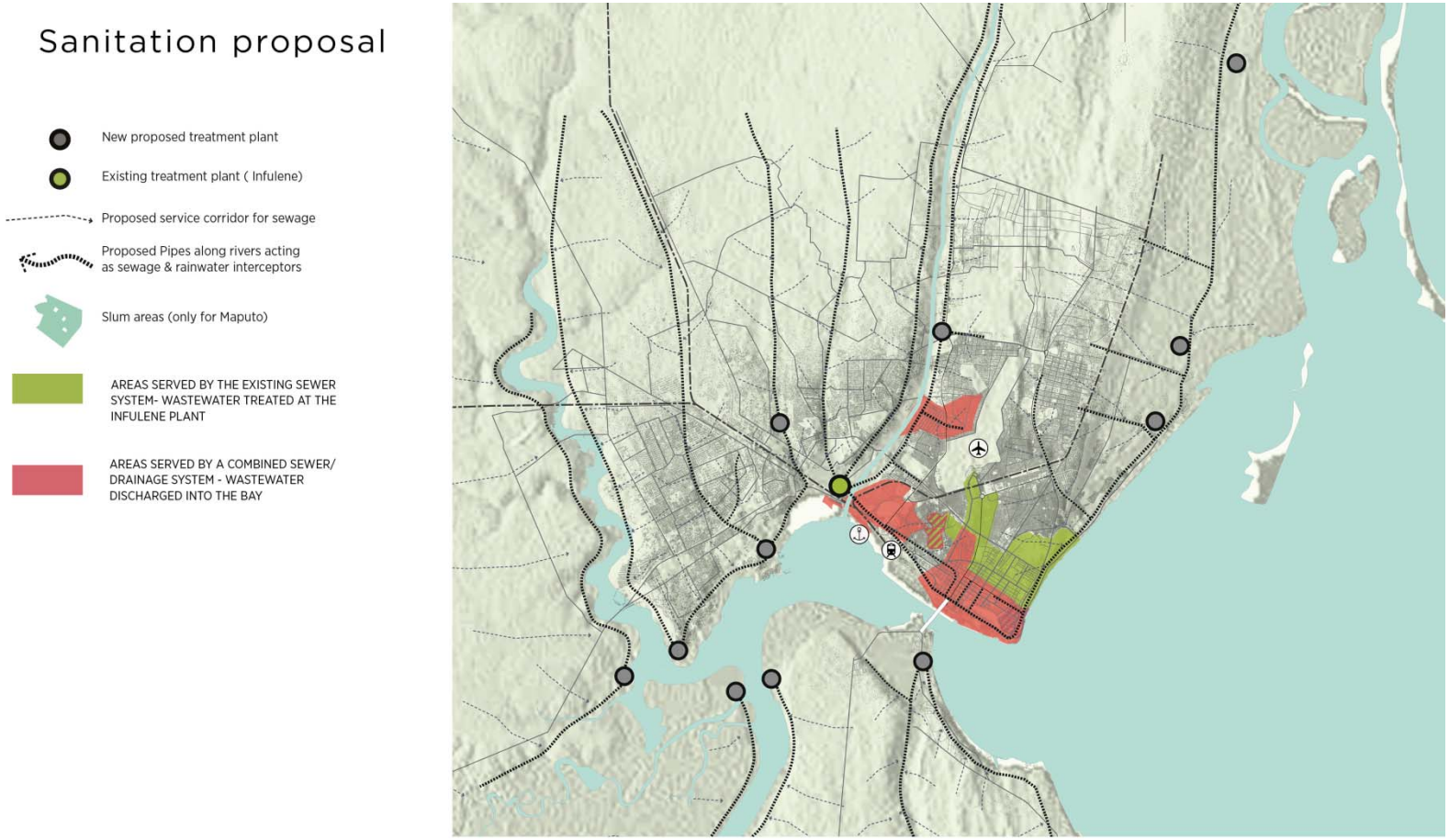


Table – Trend in current and predicted gross water demand in Maputo, Matola,Infulene m3/d
Ranked in increasing order of growth value

		2007	2015	2020	2025	2030	2035	Evolution 2007-2035 (%)
1	Infulene	14542	25914	31818	38101	44603	51130	71,55877176
2	Machava	15777	27891	34169	40848	47756	54689	71,15141985
3	Distrito Urbano nº 5	22620	29803	38261	48218	59948	73767	69,3358819
4	Matola	17352	28481	34111	40052	46152	52228	66,77644176
5	Distrito Urbano nº 4	22075	31093	38002	46067	55461	66381	66,74500234
6	Distrito Urbano nº 3	25612	26422	29098	31947	34983	38219	32,98621105
7	Distrito Urbano nº 2	15402	14913	16190	17345	18396	19359	20,44010538
8	Distrito Urbano nº 1	22653	18822	19028	19221	19403	19576	-15,7182264

C.Lotti and Associati , 2011, Maputo Water Supply roject: Consulting Services for the Preparation of Master Plan for the Greater Maputo Water Supply ystem, FIPAG

City-wide strategies for 2030



City-wide strategies for 2030

The environmental challenge

FLOODING

EROSION

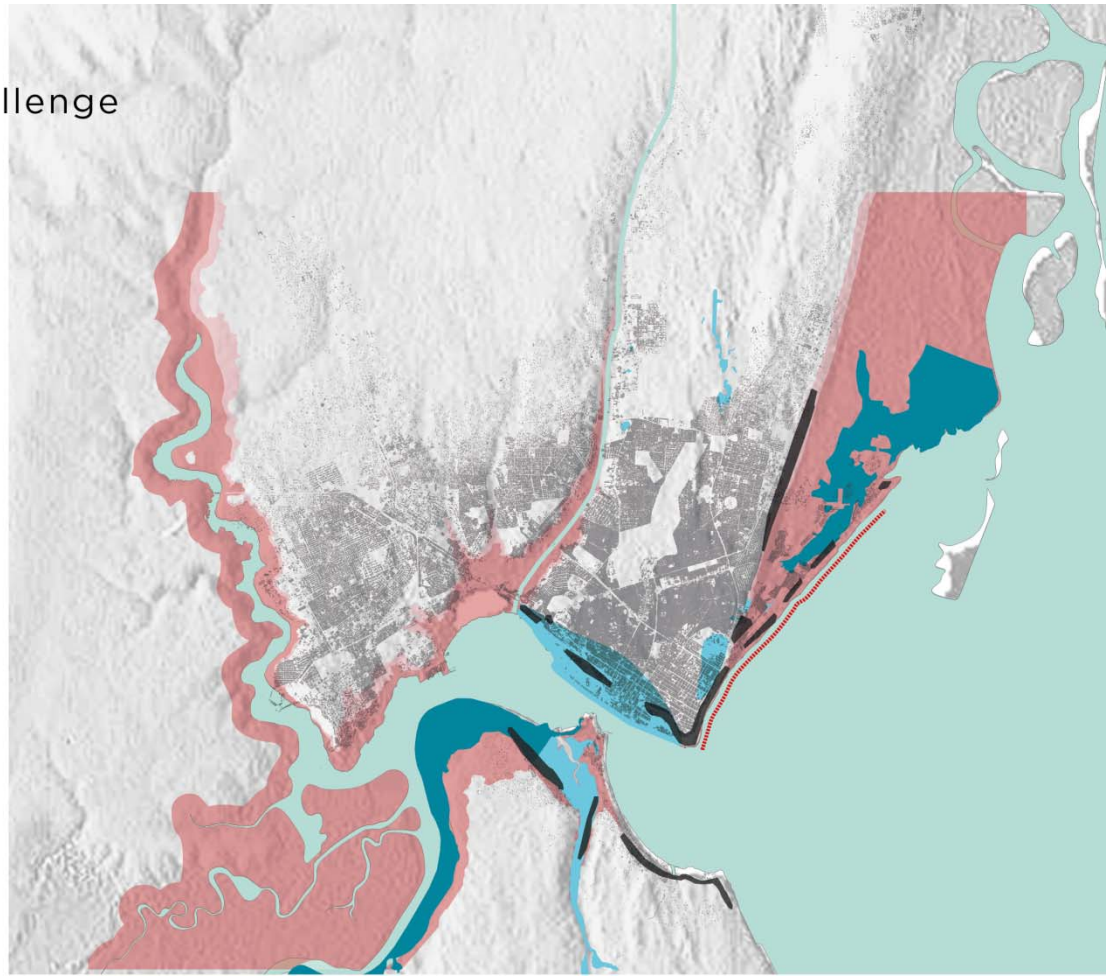
LIKELY IMPACT OF CLIMATE CHANGE

- Vulnerable to Flooding from Poor Drainage
- Vulnerable to Flooding from High Tide
- Area at Risk due to Sea Level Rise
- Erosion
- Coastal Wall

COASTAL PROTECTION ALONG THE RING ROAD OVER 7KM

CITIES AND CLIMATE CHANGE IMPLEMENTING PLAN FOR MAPUTO CITY 2010 (CURRENT STATUS?)

- Coastal defence infrastructure works
- Upgrading infrastructure to improve adaptation capacities of informal areas
- Formation of climate partnerships with affected communities
- A people-centred disaster warning system
- Tree-planting campaigning in schools
- City Waste Management Strategy
- Natural gas driven bus



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To consider…

- **A strategy** to achieve universal access by 2030(but where ‘results’ are process, mechanisms + system improvements more than numbers)
- **Capacity-building in parallel** to programme design
- Setting strategies for universal access by 2030
- **Diagnostic and course correction mechanisms** are central
- Results-based financing contra **‘adaptive management’** – results as system improvements

Thanks

“And even from my sickbed, even if you are going to lower me into the grave and I feel that something is going wrong, I will get up”

Lee Kuan Yew

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