

EcoPoor Research Framework Workshop

Dhaka, 6th March 2014

Urban green and water structures in Dhaka: Availability, quality, derived services/disservices and management and policies

Kazi Masel Ullah

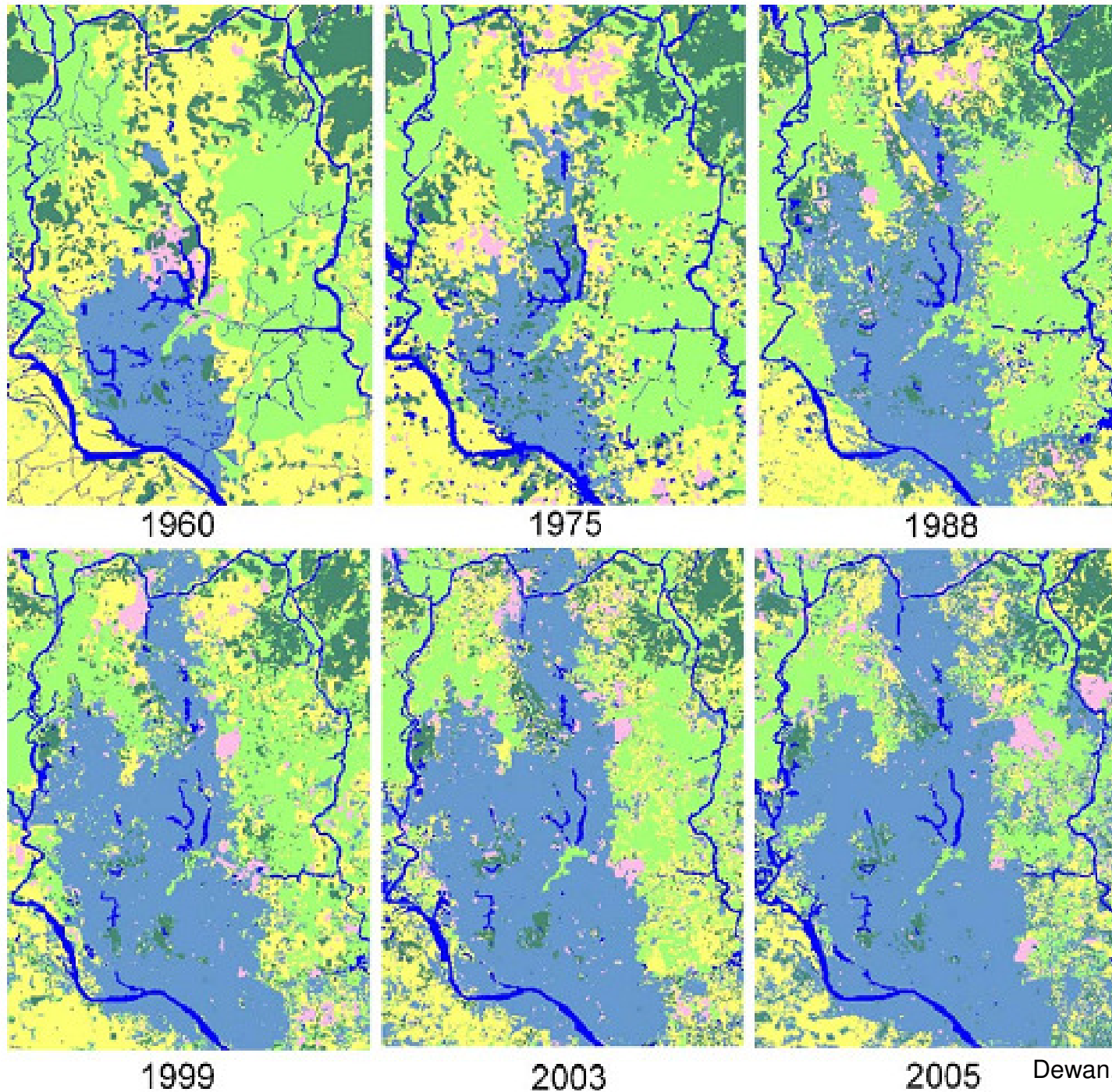
BRAC University



Structure

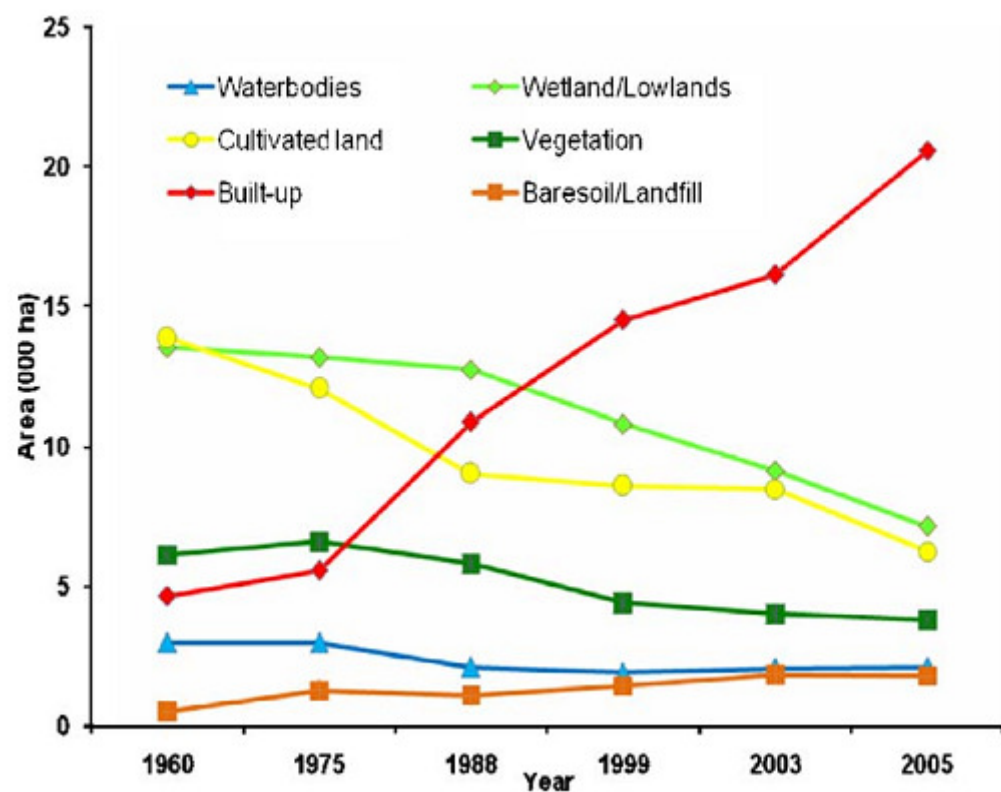
- Major green spaces and land cover changes in Dhaka City
- Water structures – location, coverage and quality
- Management and legal provisions

Land Cover Changes in Dhaka City from 1960-2005



Dewan, M. A. & Yamaguchi, Y., 2008

Land use/cover types	1960		1975		1988		1999		2003		2005	
	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%
Water bodies	2,965.2	7.1	2,976.1	7.2	2,101.5	5.1	1,886.7	4.5	2,050.9	4.9	2,101.1	5.1
Wetland/lowlands	13,514.4	32.5	13,155.2	31.6	12,715.6	30.6	10,797.3	26.0	9,124.0	22.0	7,128.8	17.2
Cultivated land	13,851.2	33.3	12,040.8	29.0	9,024.9	21.7	8,574.8	20.6	8,466.6	20.4	6,236.6	15.0
Vegetation	6,109.8	14.7	6,585.2	15.8	5,793.8	13.9	4,391.8	10.6	3,992.2	9.6	3,773.1	9.1
Built-up	4,625.4	11.1	5,550.5	13.4	10,858.9	26.1	14,486.0	34.9	16,104.6	38.7	20,549.7	49.4
Bare soil/landfill	498.0	1.2	1,256.2	3.0	1,069.4	2.6	1,427.5	3.4	1,825.7	4.4	1,774.6	4.3



Major Green spaces in Dhaka –current situation

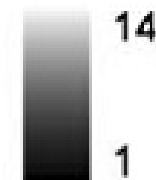


Water structures in Dhaka City

- Natural waters (rivers, canals, ponds, lakes, wetland):
- Constructed water facilities (piped water supply, wells and sewerage systems)

[illegible]

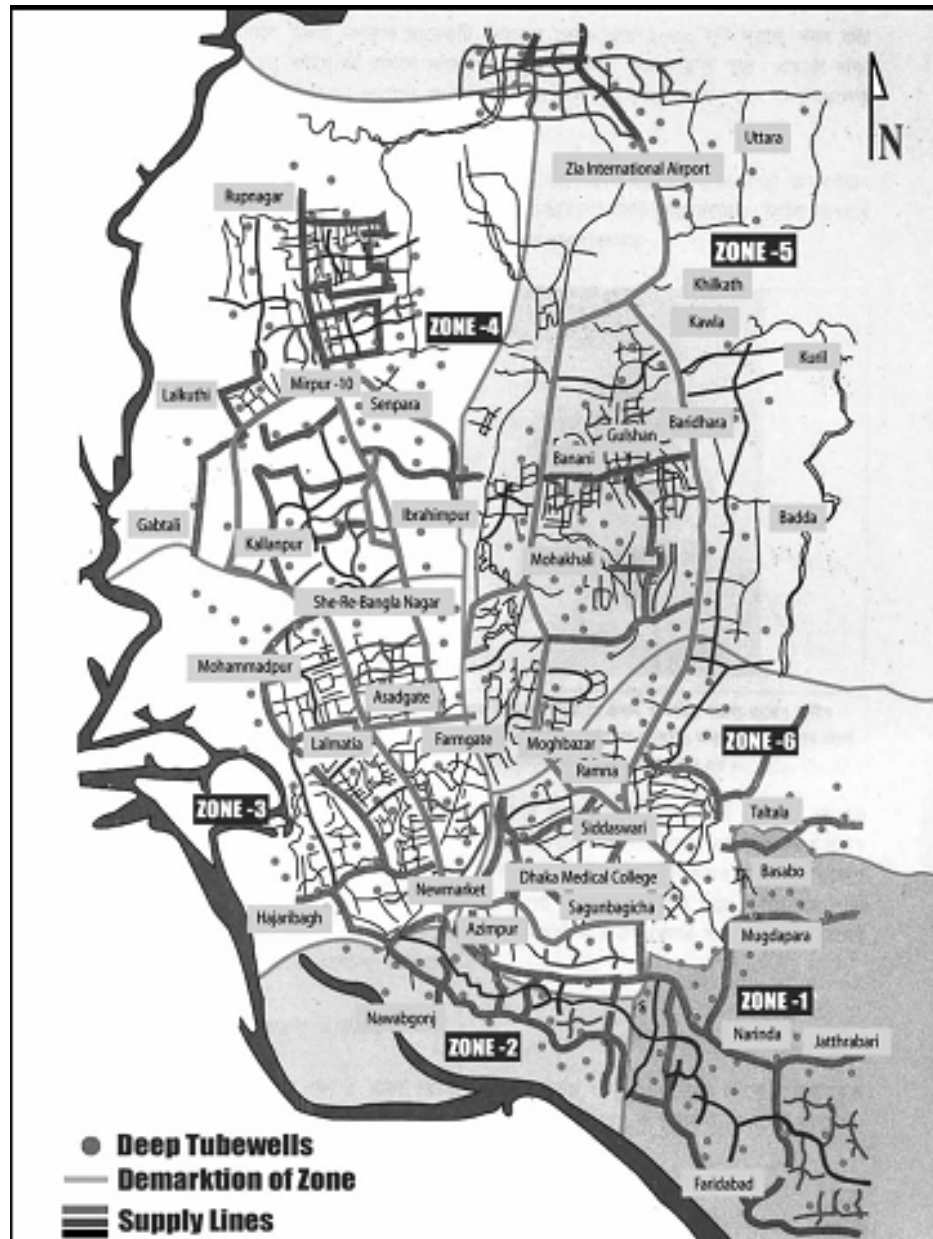
Embankment



(DEM unit: meter)



Water Supply in Dhaka



- 82% of the city's water supply is abstracted from groundwater
- Surface water quality is far below the acceptable standard in terms of physical, chemical and bacteriological parameters.
- Deficit in Water Supply is 20%
- In the low-income communities the sources are (2001) –
 - Tap – 44.35%
 - Hand pump – 43.5%
 - Unsafe sources – 12.15%

Sewerage coverage

- One third of domestic effluents does not receive any kind of treatment.
- About 38% of the population is covered by a sewerage system.
- About 30% of the population uses conventional Septic tank
- 15% uses bucket and pit latrines.
- During the rainy season, sewage overflows are common.

Management of green and water structures

- Government Agencies – RAJUK, City Corporation, WASA, WABDA etc. Plays fragmented roles.
- Private Agencies – private parks, Nursery, waste collection
- NGOs – Community water points, sanitary latrines, improved drainage
- People's collective actions – depending on their situation demand.

Policies and Acts governing green and water structures

- Dhaka Metropolitan Development Plan (1995-2015)
- The Bangladesh Environment Conservation Act, 1995
- The Environment Conservation Rules, 1997
- The Environment Pollution Control Ordinance, 1977
- The Water Pollution Control Ordinance, 1970
- The Canal Act, 1864
- Ponds, Playground, Open Space and Natural Water Reservoir Conservation Act, 2000
- National River Protection Commission, 2013
- Private Land Development Rule, 2004
- Dhaka Mohanagar Building Construction Act, 2008