

Promote Mainstreaming Conservation Values into City Planning

Glaudy Perdanahardja

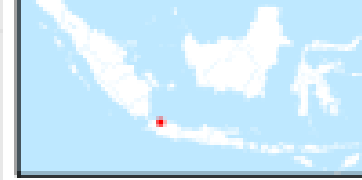
Indonesia Coasts and Ocean Program



Image credit: Koran Architecture, 2012



All of Jakarta is considered at high risk to disaster.
The most vulnerable areas of the city are those along the coast, since they are susceptible not only to the effects of tidal flooding from the sea, but also floods from the rivers and canals that are discharged into the Jakarta Bay.
(Jakarta Case Study Overview, worldbank.org)



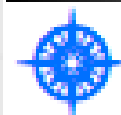
Legenda / Legend

- Batas Propinsi / Province Boundary
- Batas Kabupaten / District Boundary

Tingkat Kerawanan/Prone Level

- Rendah/Low
- Sedang/Moderate
- Tinggi/High

Informasi Kartografi / Cartographic Information



0 1,25 2,5
Kilometer

Skala / Scale :

1 : 180.000 pada ukuran A3 / 1 : 180.000
1 cm di peta sama dengan 1,8 km di lapangan
1 cm equals with 1,8 km in the field

Proyeksi Lokal / Local Projection :
UTM, Zone 48 South

Proyeksi Geografi / Geographic projection :
Lintang - Bujur / Latitude - Longitude

Datum Unit : WGS - 84

Unit Grid / Grid Unit :
Lintang - Bujur dengan interval antar garis
Lat - Long with interval 0.1 degree

Sumber Data / Data Source

Gambar background / Image background :
Blue Marble

Batas administrasi/administrative boundary
Peta digital Bakosurtanal/Bakosurtanal
Skala 1 : 250.000 / Scale 1 : 250.000

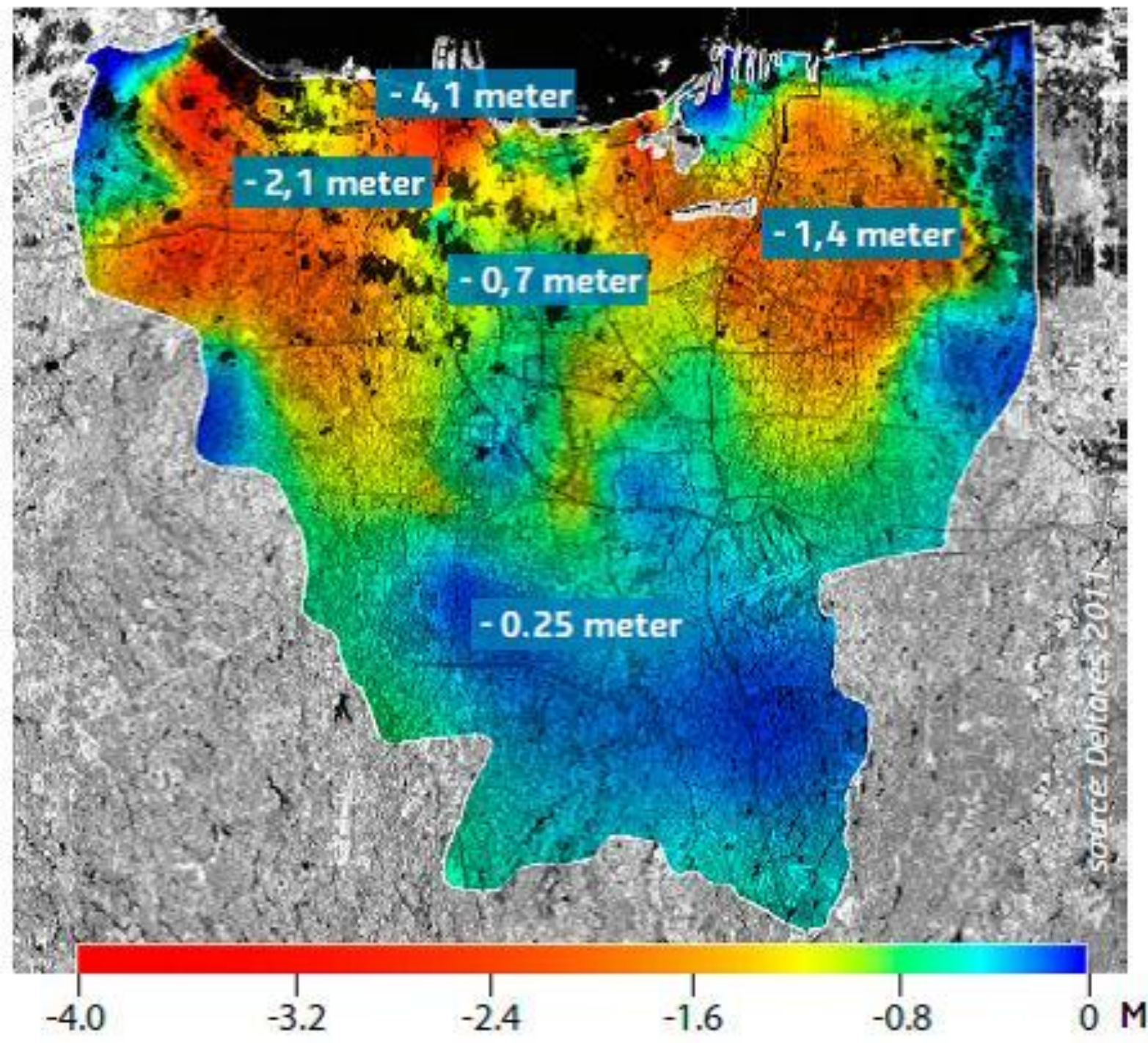
Indeks Rawan Bencana/Prone Area Index
Analisis Menggunakan DBI (dibi.bnpb.go.id)
Analisis Using DBI (dibi.bnpb.go.id)

Keterangan dokumen / Document

STOP USING GROUNDWATER

- Mainly caused by extraction of groundwater (Jakarta, Ho Chi Minh City, Bangkok, Dhaka, Shanghai and Tokyo)
- Over-exploitation of groundwater resources, especially when surface waters are seriously polluted (Jakarta, Dhaka)
- In China the average total economic loss due to subsidence is estimated at around 1.5 billion dollars per year of which 80-90% are indirect losses. In Shanghai, over the period 2001-2010, the total loss cumulates to approximately 2 billion dollar

Source: Deltares - Taskforce Subsidence, 2015

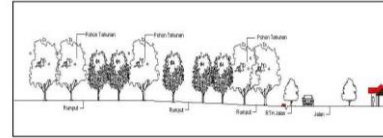




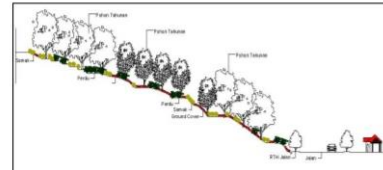
Many kampongs in Jakarta are located on waste ground along the city's polluted rivers and canals, where 700,000 m³ of sewage is dumped each day.

Source: <http://www.globaleye.org.uk> (2000)

Credit image: <http://carbon-based-ghg.blogspot.co.id>



Gambar 2.2 Pola Tanam Hutan Kota Strata 2



Gambar 2.3 Pola Tanam Hutan Kota Strata Banyak

Luas ruang hijau yang diisi dengan berbagai jenis vegetasi tahunan minimal seluas 90% dari luas total hutan kota.

Dalam kaitan kebutuhan air penduduk kota maka luas hutan kota sebagai produsen air dapat dihitung dengan rumus:

$$La = \frac{P_0 \cdot K \cdot (1 + R - C)^t - PAM - Pa}{Z}$$

dengan:

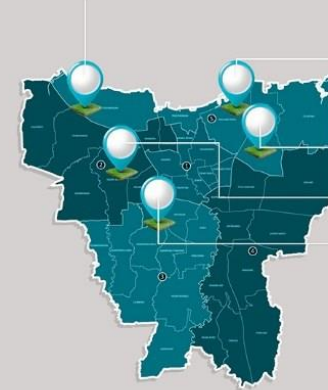
- La adalah luas hutan kota yang harus dibangun
- P₀ adalah jumlah penduduk
- K adalah konsumsi air/kapita (l/hari)
- R adalah laju peningkatan pemakaian air
- C adalah faktor pengendali
- PAM adalah kapasitas suplai air perusahaan
- t adalah tahun
- Pa adalah potensi air tanah
- Z adalah kemampuan hutan kota dalam menyimpan air

Alih Fungsi Ruang Terbuka Hijau di DKI Jakarta

Ruang Terbuka Hijau (RTH) merupakan suatu bentuk pemanfaatan lahan pada satu kawasan yang difungsikan untuk penghijauan tanaman serta perlindungan habitat tertentu, budidaya pertanian, meningkatkan kualitas atmosfer, hingga menunjang kelestarian air dan tanah.

aktual.com

40% Luas Ruang Terbuka Hijau yang ideal dari total luas wilayah sebuah provinsi

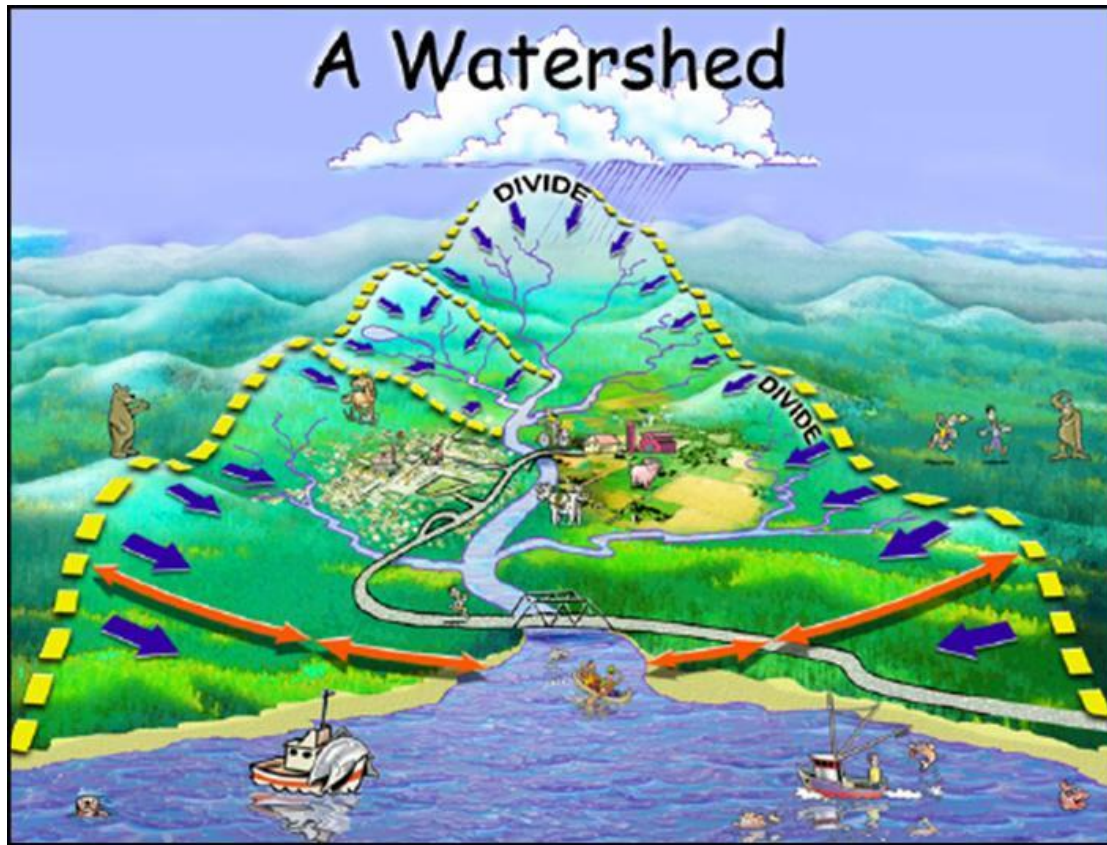


3.000 Hektar

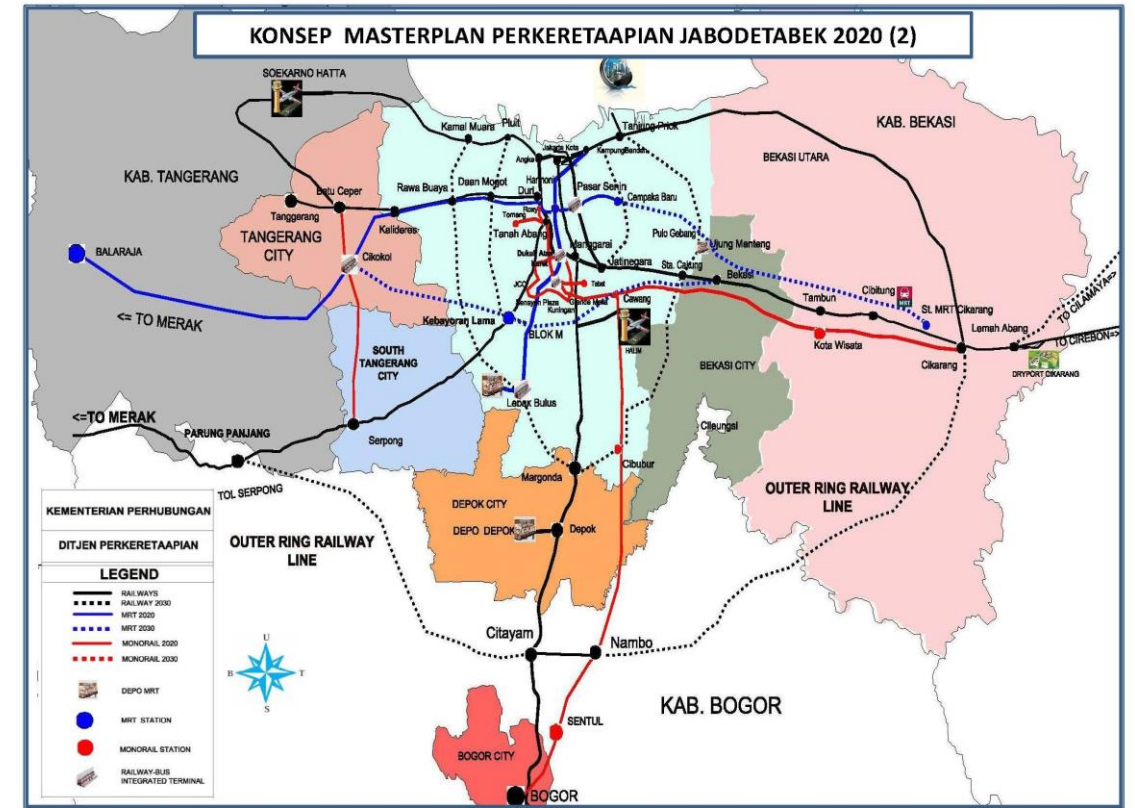
Lebih Ruang Terbuka Hijau dialihfungsikan menjadi kawasan komersial dan Permukiman elit



WE NEED MORE FORESTS

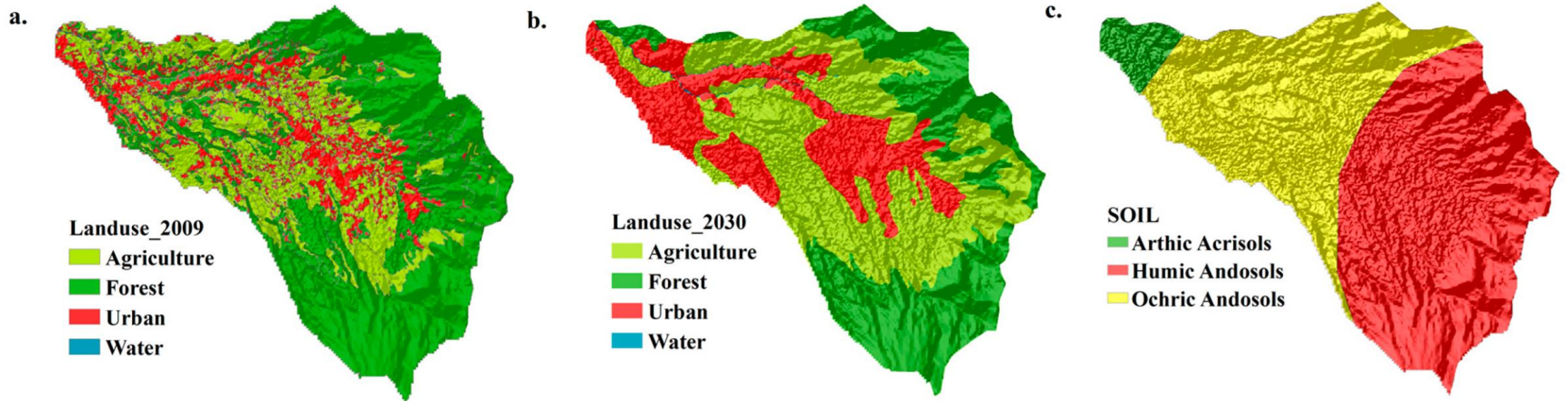


Credit image: <https://bebasbanjir2025.files.wordpress.com/2008/>

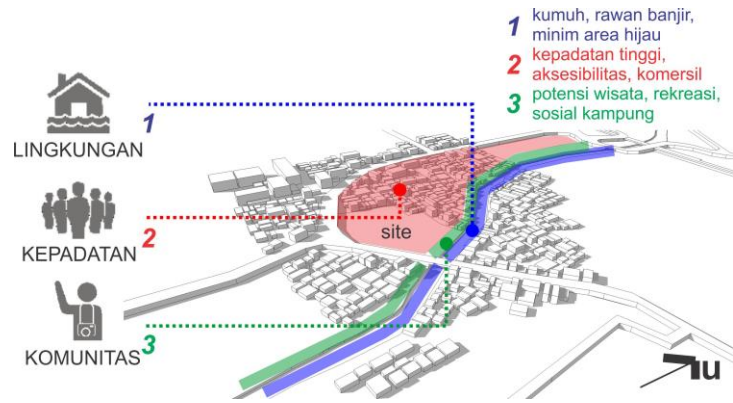


Credit image: <http://jakartabytrain.com>

LOOKING AT ALL ASPECTS OF DEVELOPMENT:
ECOSYSTEM AND SOCIO-ECONOMIC



land-use changes upstream of the basin altered hydrological behavior and may result in flooding downstream, where the city of Jakarta is located. Deforestation and urbanization are the main causes of rising flooding volume and peak flow in this watershed. Therefore, it is important to protect the forest in this area (Emam et al. 2016)



Credit image: kompasiana.com/



Credit image: kompasiana.com/



Credit Image: <http://news.liputan6.com/>

catchment area (by definition)
an area that serves to catch water


INDONESIA PROGRAM

An aerial photograph showing a river meandering through a vast, dense green forest. The river is a light greyish-blue color, contrasting with the deep green of the trees. The forest appears to be a mangrove or a similar wetland environment.


THANK YOU

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nature.or.id

 TheNatureConservancyIndonesia

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