

ADB Transport Forum

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Urban Transport Module

Land Development and Transportation

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The Issue

For urban growth to be sustainable in the future, new land for development must be provided which is:

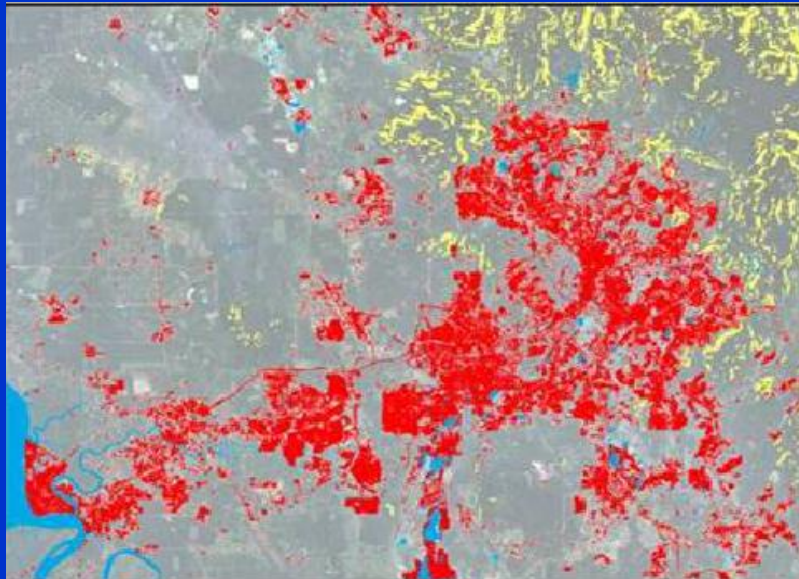
- Sufficient to provide for the needs of the current and future urban population, rich and poor alike.
- Not located in environmentally sensitive areas (ESAs).
- Provided with an adequate level of physical and social infrastructure.

The Context (1)

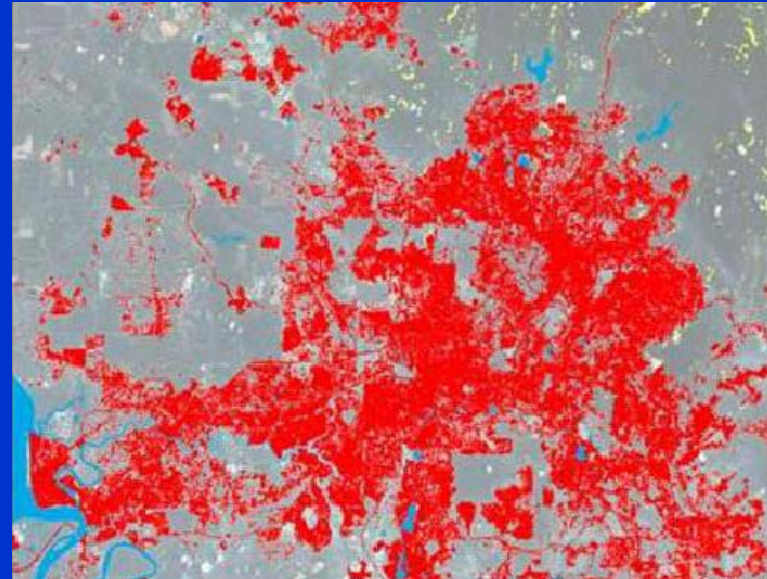
- Urban populations in many Asian cities will increase by an average of 50% in the next 20 years.
- Urban Densities have been decreasing, especially in rapidly-growing, middle income Asian cities. This trend is likely to continue due to:
 - Decreasing household size
 - Increasing incomes and car ownership which both encourage suburbanisation
 - Relocation of population from central areas due to market- or government-led redevelopment schemes.

As a result, most Asian cities will double in size over the next 20 or so years.

Kuala Lumpur: Built up area more than doubled between 1989 and 2001 from 385 sq. km. to 805 sq. km; population increased from 2.7 million to 5 million; density decreased from 7,130 to 6,160 per sq. km.



1989



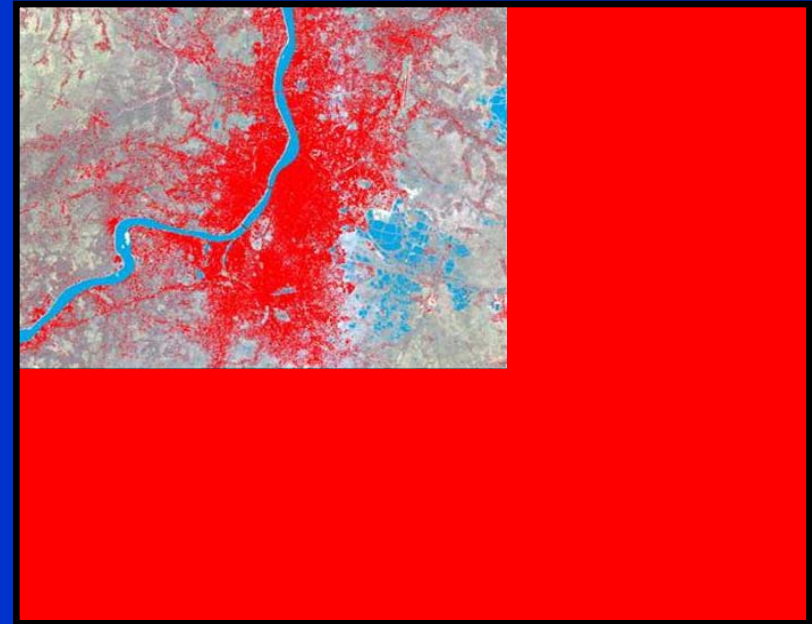
2001

Why the new SUT Paradigm is Vital

Kolkata: pop. 2000: 7.8 million;
density 16,200 per sq. km. ;
Built up area: 480 sq. kms; area of
image: c. 1,200 sq. kms

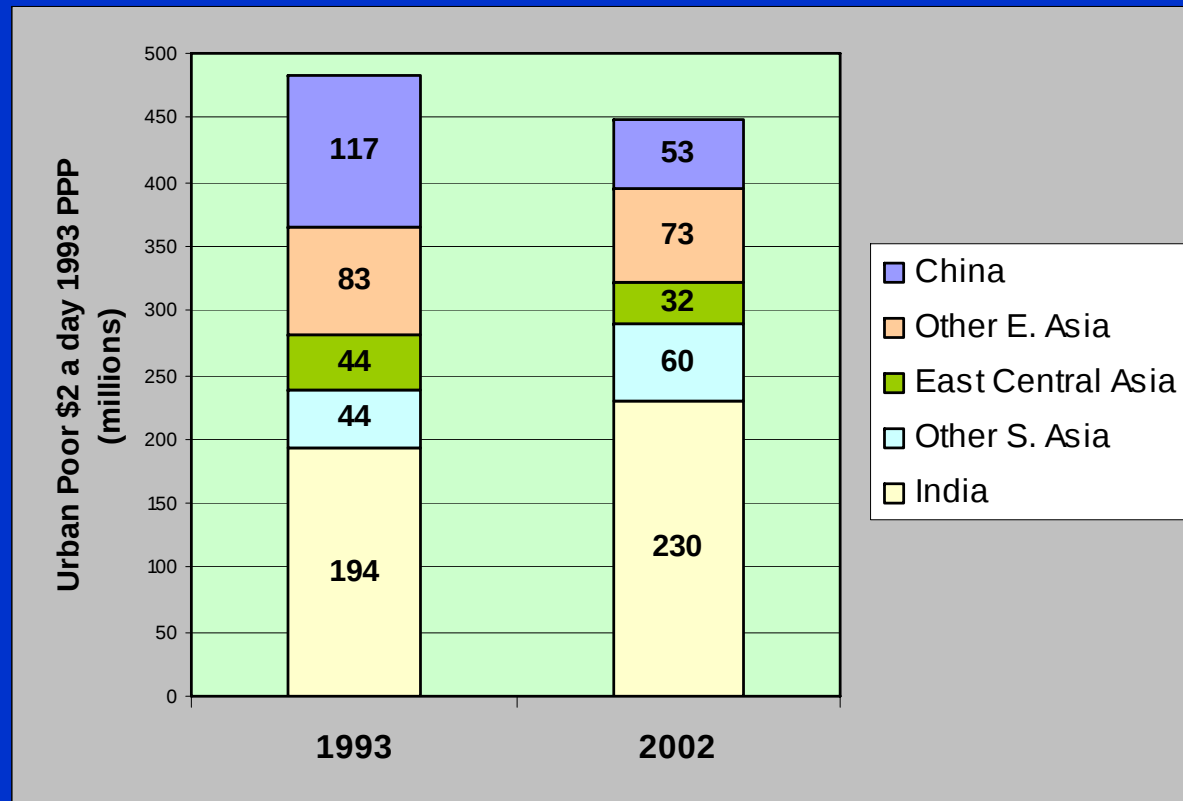
Assuming a density of c. 2,000
per sq. km, Kolkata would cover
an area of around 3,800 sq. kms.
- approximately the entire area
of the grid shown.

This is based on the existing
population and makes no
allowance for future expansion. If it
did, the area covered would be
approximately double that shown.



The Context (2)

- Urban poverty will remain a persistent and serious problem in many Asian cities for the foreseeable future.
- Catering for the housing needs of low income groups needs has to be a key component of land development policy.
- Increasingly, the poor will live in peripheral areas – as will the urban population as a whole.



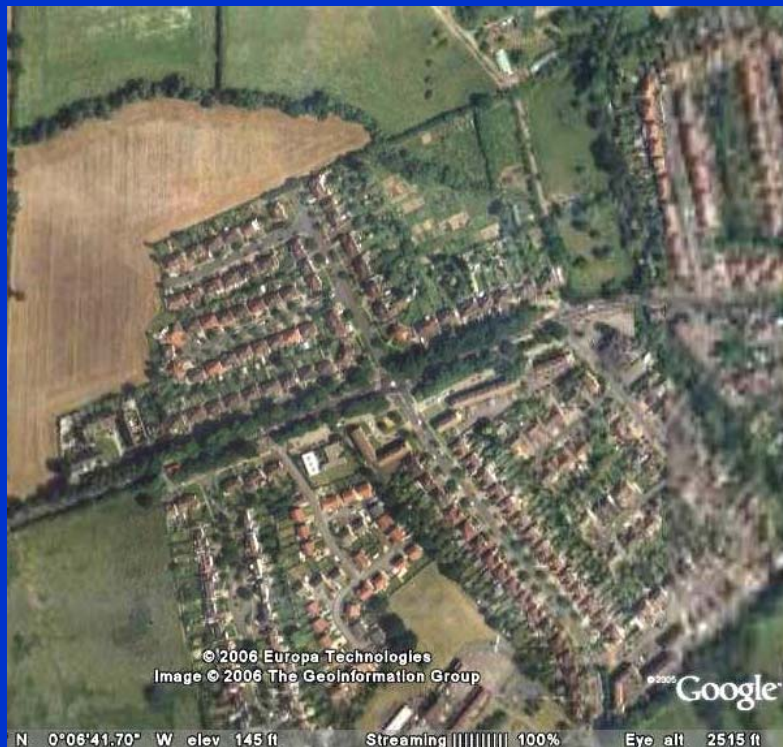
The Tools Available

- Land Use Planning
- Direct Intervention in Land Development
- Development of Transport Networks

Land Use Planning – Developed Country Cities

- Introduced in western cities to address similar problems to those facing DCCs today: slums, ribbon development, uncontrolled urban sprawl, loss of agricultural and amenity land, inadequate infrastructure, proximity of incompatible uses.
- Allied to planning standards and building regulations, these have been generally successful in creating good quality cities.
- BUT sometimes leading to very low densities (USA), and sometimes to a high level of housing unaffordability (UK).

Strictly Controlled Private Sector Land Development



Land Use Planning – Developing Country Cities

- Most DCCs have planning systems modeled on those from developed countries. These have in the majority of cases been ineffective in creating anything approaching sustainable development due to:
 - absence of updated plans,
 - lack of implementation or enforcement mechanisms, unaffordable standards,
 - protracted approval processes,
 - weak technical capability; and
 - political interference in land related decisions.
- There are very few positive examples in DCCs.

The result is that anything from 50% to 85% of new development in DCCs occurs outside the formal planning system.

As a result,

Unplanned settlements
with minimal services

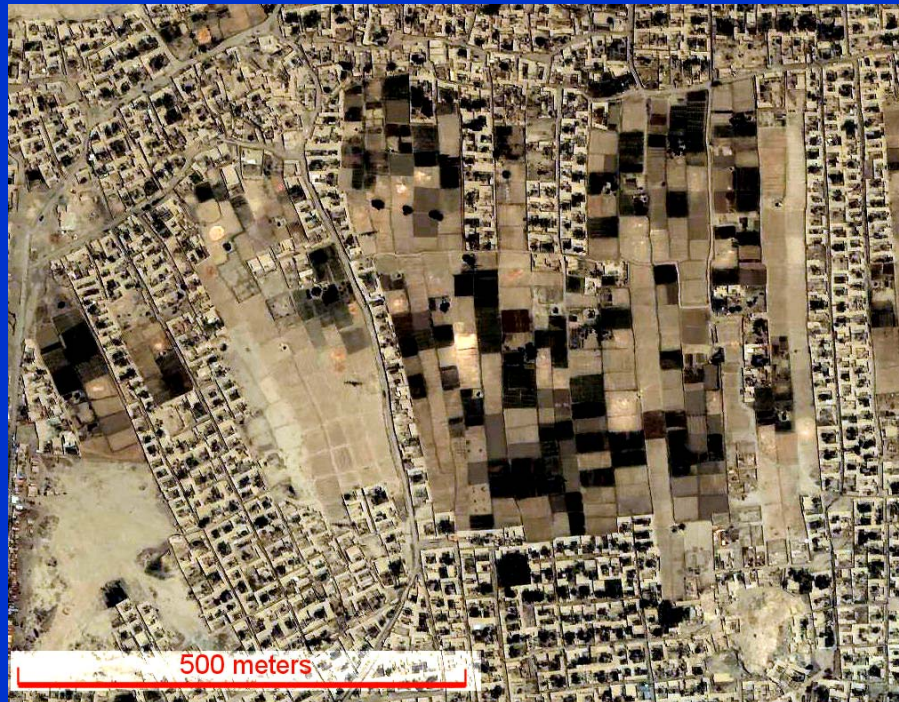


Photo: © A. Bertaud

Lack of integration between
new developments



And

Juxtaposition of Incompatible Uses



Encroachment and Slums



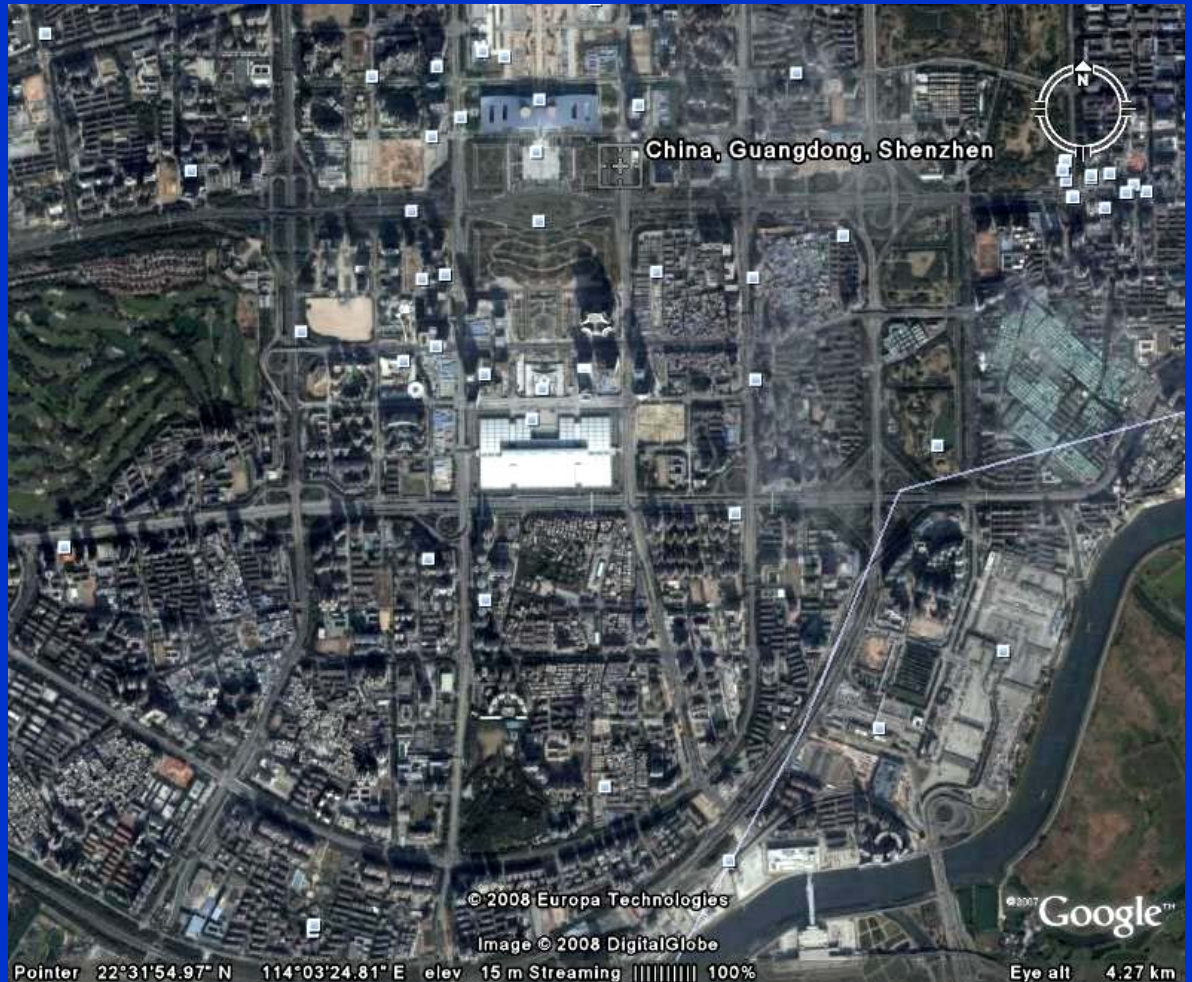
Direct Interventions in Land Development

Intervention	Comments
Land Acquisition by public sector	- Requires: land, finance and legislation. - Can be used for low cost housing / sites and services but more often for on-selling to private developers. - Primary means of land development in China where 'profit' from land sales provides finance for infrastructure. Used for major developments (New Towns) in the West and elsewhere. - Often entrains legal conflict and social disruption.
Land Pooling/ Readjustment/ Consolidation (LP/LR/LC)	- Designated area is replotted to include roads, public facilities and residential plots with a proportion ceded by land owners in exchange for saleable plots with enhanced values. - Procedurally complex as it involves detailed negotiations with, and consent of, owners. - traditional method for land development in Japan, Korea and Taiwan; now largely replaced by direct acquisition by developers. Successfully used in Nepal and widely practiced in Turkey; examples from Latin America.
Guided Land Development (GLD)	- Similar to Land Pooling but with less public sector involvement. Government provides secondary road network and owners/ developers develop the land subject to agreed planning and building standards. - Used as basis of New York plan in 1811. Attempted in Jakarta and Dhaka but opposition from owners and lack of government commitment. Some examples from Latin America.
<u>To a large extent, GLD and LP/LR replicate activities of informal developers but ensuring minimum site, plot and building standards. Often used in conjunction with approved plan, more flexible standards, and streamlined approval process.</u>	
Obtaining Contributions from developers	- Wide variety of methods: affordable/ social housing quotas for new residential developments, land sharing, 'legal' and 'extra-legal' direct financial contributions for off-site infrastructure/ community facilities. Provide valuable increase in public facilities and low income groups but less potential for regular revenue streams; less feasible in cities with low development precious; not necessarily transparent and open to abuse. - Very prevalent in developed and developing country cities in some shape or form.

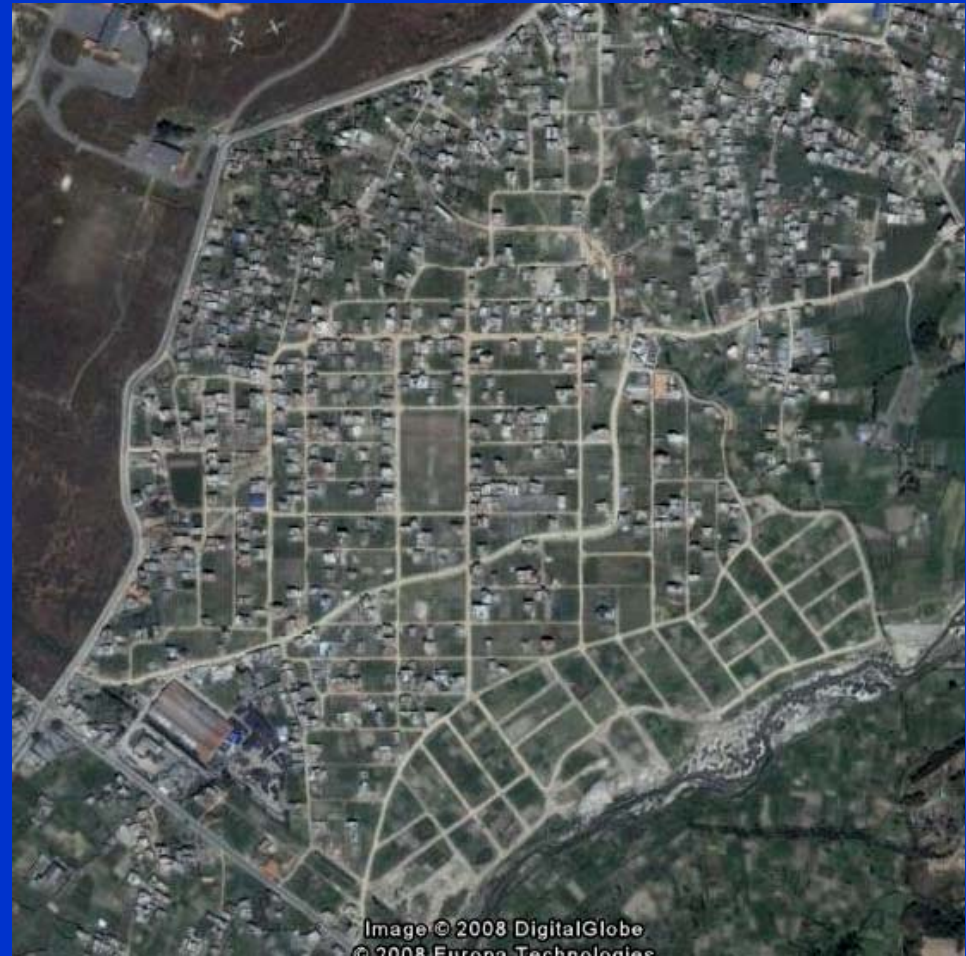
Comprehensive Government Led Development

Shenzhen

A fishing village to a mega-city in in 20 years!



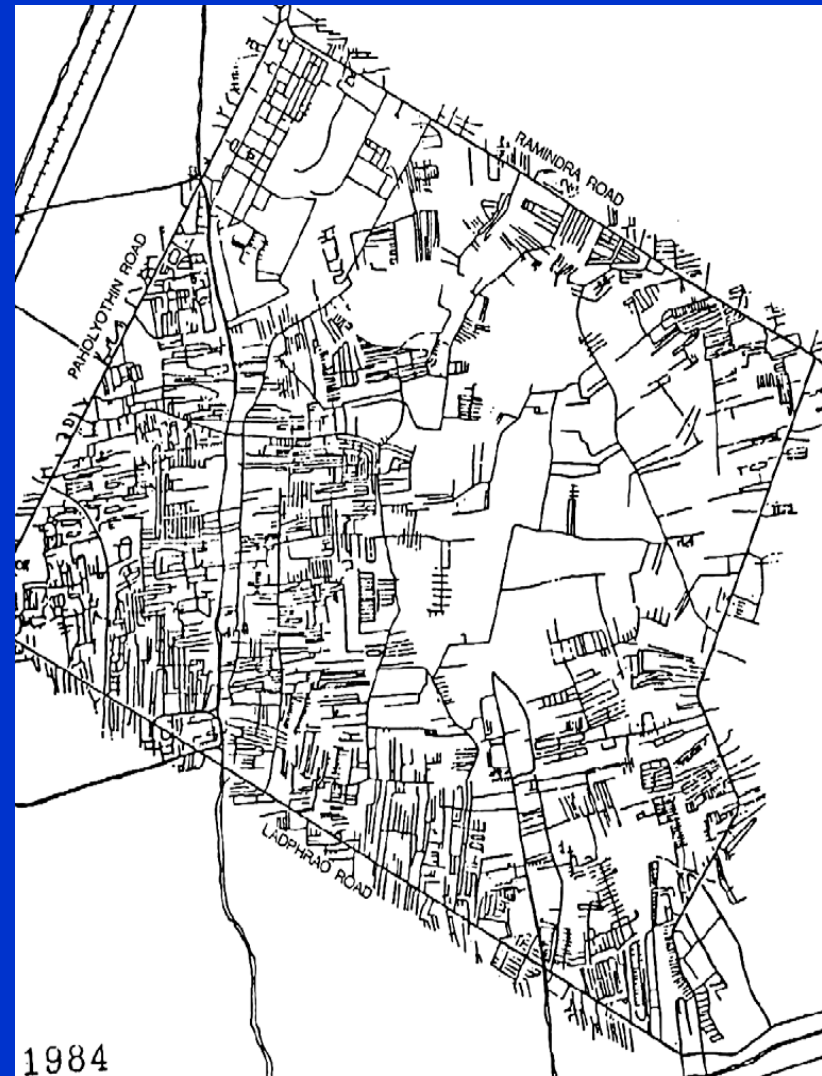
Unguided and Guided Land Development



Pro-Active Development of Transport Networks

- Land cannot be developed if there is no access, whether by foot, cart, 4WD, truck, bus or car.
- **It follows that the construction of transport networks will influence development.**
- Most DCCs have established primary road (or rail) networks which are periodically improved through widening, or new alignments - almost always by public sector.
- BUT improvements are hampered by difficulties related to land acquisition and social disruption, i.e. retro-fitting is very expensive if not impossible.
- **Secondary roads** are vital for effective land management as they provide access into and out of new developments by private, public and non-motorised traffic.
- Yet there are very few examples of pro-active secondary road development, except as part of comprehensive schemes - we only found **one** such example (in Ecuador).

The Absence of Secondary Roads



1984

The Way Forward

- **More planning:** strategic urban spatial plans (covering entire metropolitan area), enhanced enforcement.
- **Less planning:** much less restrictive zoning, more flexible standards, streamlined procedures.
- **Direct interventions in land development:** acquisition (if feasible) otherwise LP/LR and GLD, enhanced and transparent developer contributions, incentives to developers, e.g. legitimisation.
- **Construction and safeguarding of primary and secondary road networks.**

The Crucial Messages

- Unless issues related to future urban expansion are addressed, it is difficult to see how anything approaching sustainable development will be achievable.
- Yet virtually no DCCs are currently doing this; China is the big exception.
- The crucial prerequisites are:
 - A strong political commitment and direction from government, especially at city level.
 - Increased land supply by only restricting development in ESAs.
 - The use of transport networks to influence the location and phasing of development through construction and safeguarding.
 - To work with land owners and developers, especially informal, to improve quality, and inclusiveness, of development.