



Rapid Urbanization

What can land surveyors do?

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What is it all about?

population	World (millions)	Urban (millions)	%	Rural (millions)	%
2011	6,974	3,632	52.1	3,341	47.9
2050	9,306	6,252	67.2	3.053	32.8

Source population growth:

UN, 2009, World Population Prospects (the 2008th revision), New York

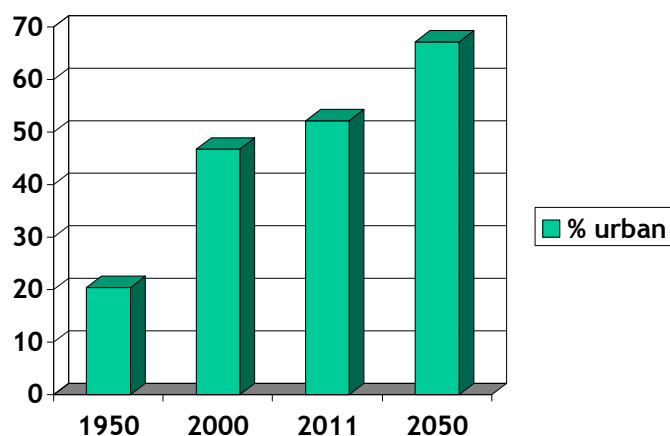
Source urban/rural:

UN, 2012, World Urban Prospects, New York

UN/Habitat, 2008, State of the world's cities, Nairobi



Development of urban population %



Source
UN, 2012, World Urban Prospects, New York



In emerging economies ?

	Slum dwellers	% of urban population
1990	656,739,000	46.1 (of 1,424,596)
2000	766,762,000	39.3 (of 1,977,289)
2010	827,690,000	32.7 (of 2,531,162)



UN/Habitat, 2008, State of the world's cities, Nairobi

2012 UN, World Urban Prospects, New York tabel 'less developed countries'

Yearly increase slum dwellers

	persons
Annual number increase Source: World Bank, 2012, World Urban Prospects	28 million
Annual number lifted Source: UN Millennium Development Goals Reports 2010, 2011, 2012	22 million
Increase saldo	6 million



Rural and Urban Poverty

2002	total	urban	%
<1.25 \$/day	1,207 million	291 million	24.6%
2.00 \$/day	2,884 million	752 million	26.6%

Source IFAD, 2011, Rural Poverty Report, Rome

Poverty = rural until 2040

Source: Baker, J.L., 2008, Poverty: a global view, WB Urban Paper 5(2008)



Need for shelter

2050	number
Growth of population	2,500,000,000
Slum dwellers	500,000,000
Extra People need a house	3,000,000,000

Per day 96,150 houses

Source: UN/Habitat, 2005, Facts and figures financing urban shelter, Nairobi

Source: Augustinus, 2009, Improving access to land and shelter, WB/FIG

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What to do? : twin track approach

- Prevention of slum formation
- Slum upgrading

(Source: Payne, G., 2005, Getting ahead of the game, Environment & Urbanization Vol. 17 No 1; UN/Habitat, 2008, State of the World's Cities, Nairobi)



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First track: Prevention



- Conventional masterplanning does not deliver livelihood for growing number of inhabitants
- Conventional planning criminalizes informal economy

Sources

FIG, 2008, The road to more sustainable places, FIG Publ 42

UN/Habitat, 2009, Planning sustainable cities, Nairobi

COPHRE, 2009, Global survey on forced evictions, Geneva

Jaffe, E., 2011, Improving urban planning in Africa, Atlantic Cities 22/2011

Agustinus C, Sorlie, E., 2011, Land governance for rapid urbanization, Urban World Febr/April

UN/Habitat, 2011, Quick Guide (Land) No. 3, Nairobi

Odendaal, N., 2012, Reality check: planning education, Cities 29(2009)

Nunas Silva, C., 2012, Urban Planning in Sub Saharan Africa, Cities 29(2012)

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Conventional masterplanning



- Too much a controller, not an enabler
- Too strong building standards
- Too rigid planning standards
- Too much land reservation for roads
- Too large minimum plot sizes
- Serves the elites rather than the poor
- Too complicated regulatory framework

Sources: Payne, 2005; Agustinus, 2009; Agustinus & Sorlie, 2011, World Bank 2006

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New forms of planning



- Slum upgrading more expensive than slum prevention, so planning necessary
- Governments should take the lead
- Make land and trunk infrastructure available
- Develop services (health, education, employment)
- Create realistic and enforceable regulations and standards

(Source: UN/Habitat, 2009, Planning Sustainable Cities, Nairobi)

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Examples



- Strategic spatial planning: give direction on the long term, flexible local projects, planning as coordination (Source: Cities Alliance, 2006, Guide to City Development Strategy CDS, Washington)

- Urban Management Programmes

(Source: World Bank, 1999, Cities Alliance for Cities without Slums, New York)

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Planning requires information

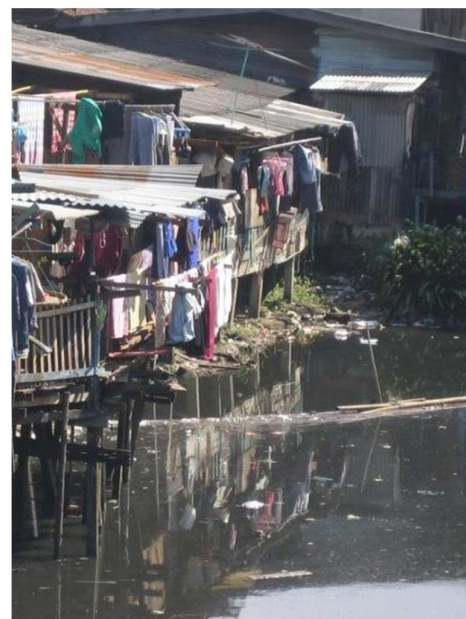
- **Information**
(Source: Sluizas, 2004, Managing informal settlements, Enschede)
- **Land information**
(Source: UN/Habitat, 2010, Guide to City Wide Planning, Nairobi)
- **Not only legal data**
(Source: Augustinus, C., 2009, Improving access to land and shelter, WB/FIG; Augustinus, C., Sorlie, 2011, Land governance for rapid urbanization, Urban World Febr. 2011; UN/Habitat, 2011, Quick guide to land, Nairobi)
- **Inclusion of socially marginalized groups**
(Source: Satterthwaite, D., 2009, Getting land for housing, E&U 2009 21:299)
- **Effective street addressing**
(Source: World Bank, 2005, Effective Street Addressing and the management of cities, Washington)
- **Enumeration methods**
(Source: Huchzermeyer, M., 2008, Enumeration as a grassroots tool towards securing tenure in slums, GLTN Working paper; UN/Habitat, 2010, Count me in, Nairobi)



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Second track: upgrading

- Slums are characterized by lack of basic services (sanitation, water, waste collection, electricity supply, surfaced roads, road lighting, rain water drainage), substandards housing, overcrowded and high density, unhealthy living conditions, and insecure tenure.
(Source: UN/Habitat, 2003, The challenge of slums, Nairobi)
- Property rights are critical to sustainable approaches, amongst better governance, financial systems and social frameworks
(Source: Cities Alliance, 1999, Cities without slums, Washington)



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A brief history of dealing with slums

- **< '70: negligence and clearance**
(Source: UN/Habitat, 2003, The challenge of slums, Nairobi)
- **Government destroyed more low income houses than they constructed.**
(Source: Werlin, H, 1999, The slum upgrading myth, Urban Studies Vol 36/9; Mukhija, V, 2002, An analytical framework for slum upgrading, Habitat International 26(2002)).
- **>'70 recognition as an urban reality that require adequate response: development self-help and sites&service programmes.**
(Source: UN/Habitat, 2003, The challenge of slums, Nairobi)
- **Sites&services programmes of World Bank obstructed by absence of government policies** (Source: World Bank, 2006, Thirty years of shelter lending)
- **Political will is a major precondition** (Source: UN/Habitat, 2003, The challenge of slums, Nairobi)



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Modern slum upgrading

- **Creating awareness and advocacy (monitoring system?)**
- **Long term political committment (reduce political unwillingness and apathy)**
- **Policy reform and institutional strengthening (housing, land, infrastructure, coordination between central and local government)**
- **Implementation and monitoring (transparency, pro poor approaches, training, community participation, attention to rent not only ownership)**
- **Scaling up (replication)**

(Source: UN/Habitat, 2011, Quick Guides; World Bank, 2006)

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Sound information base

- Because of existence of poor land record systems and centralized information systems (Source: Fourie, C., 2001, Land and Property registration at cross roads, Habitat Debate 2001(7) 3:16),
- need for local land registers, inclusive registers, parallel registers, simplified recording of spatial representation (Source: UN/Habitat, 2004, Pro Poor Land Management, Nairobi),
- for example through LADM (Source: Augustinus, C., 2009, Improving access to land and shelter, WB/FIG)
- and the continuum of land rights (Source: 23rd Governing Council UN/Habitat Resolution on sustainable urban development through expanding equitable access to land, housing and basic services and infrastructure, 2011, Nairobi)

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Land and legal security

- Insecurity tenure = major characteristic of slums
- Better governance ('local authority' = often slumlords or mafia)
- Granting freehold titles ≠ a solution
- Range of land rights to be recognized
- A way: group titles
- Protection against eviction = overriding priority
- Housing loans (Grameen, WB Slum Upgrading Facility)
- People have security when
 - evidence of documentation proof of tenure
 - protection from eviction



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Surveyors' contribution



or



Outsiders say:

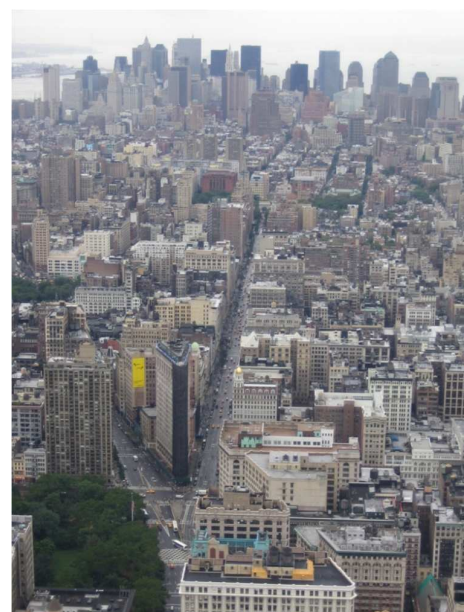
- Only 1.5 billion out of 6 billion land parcels are surveyed and recorded
- In only about 50 countries some sort of LAS exists
- Crowdsourced maps are better and quicker than official maps (Haiti?)
- Land surveyors unreasonable outdated in methods and accuracy requirements....
- Land surveyors hamper completion of cadastres...

What we can do:

- Quick and cheap land spatial information
- Master non-spatial data such as addresses, enumeration...
- Facilitate pluriform land and housing rights
- Manage land readjustment
- Master innovative planning and upgrading.....
- Linking informal and formal economy
- Create tax revenues for cities
- Be a champion in systemdesign to support all this

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Thank you
for listening.



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