UN HABITAT
FOR A BETTER URBAN FUTURE

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EXECUTIVE TRAINING

Orientation Workshop

THE CITY PROSPERITY INDEX:
urban indicators for strategic city planning and decision making.

Table of Content

1.

Indicators: what it is, what it serves for:

A key measure to describe what is happening in the real world?

What are indicators?

Source: Based on 'The Good Indicators Guide'. http://www.apho.org.uk/resource/item.aspx?RID=44584

- An **indicator** is "a summary measure that aims to describe in a few numbers as much detail as possible about a system, a phenomenon, to help understand it, compare, predict, improve, and innovate."

Why are indicators so important?

- Indicators are extremely important forms of measurement, but they can also be controversial.
- Like all powerful tools, they can easily do as much harm as good.
- The world is becoming a more transparent and competitive place, where people want instant summary information. Indicators appear to fit this need and are therefore becoming an increasingly important part of how everybody works.

Source: The Good Indicators Guide. http://www.apho.org.uk/resource/item.aspx?RID=44584

ANALOGY:
What are CITY indicators?

A **CITY INDICATOR** reflects "a characteristic of an urban area, a population residing within its boundaries, or the environment which is subject to measurement and can be used to describe one or more aspects of the state of an individual urban area or the people who reside within its boundary."

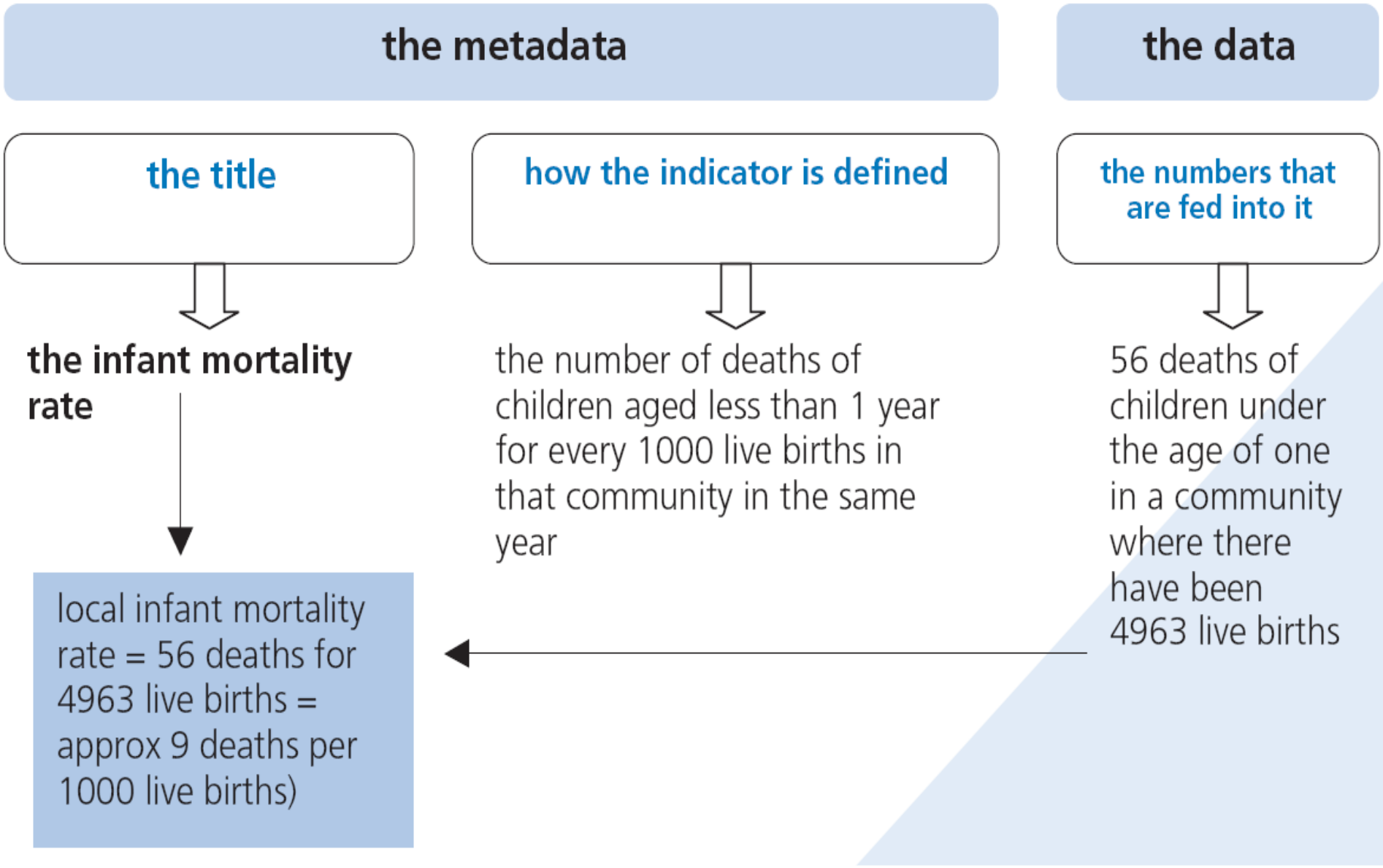
Source: Based on Nancy Allee, University of Michigan. Webinar, January 27, 2010. Community Health Status Indicators (CHSI)

3 key roles of measurement

1. For **understanding**: to know how a system works, how a particular development area performs and how it might be improved (research role)

2. For **performance**: monitoring if and how a system, an urban development sector is performing to an agreed standard (performance/managerial/improvement role) and whether policies are resulting in improvements

3. For **accountability**: allowing systems, organizations and policies to hold themselves up to society, the government and taxpayers and be openly scrutinised by the public (accountability/democratic role).


the metadata
the data
the title
how the indicator is defined
the numbers that are fed into it
the infant mortality rate
the number of deaths of children aged less than 1 year for every 1000 live births in that community in the same year
56 deaths of children under the age of one in a community where there have been 4963 live births
local infant mortality rate = 56 deaths for 4963 live births = approx 9 deaths per 1000 live births)

City Product per Capita - Metadata

Source: City Prosperity Index Toolkit, UN-Habitat, 2014.

TITLE	DEFINITION	UNIT
City product per capita	The City Product per capita is the sum of the gross value added by all producers within a city, relative to its total population	US$ per capita

METHODOLOGY

The City Product per capita is calculated as the sum of the product between the National Gross Domestic Product (GDP) in each economic sector (primary, industrial and service sectors) and the employment sector's share of the national's sector employment, divided by total city population:

$$City\ Product\ per\ capita = \frac{\sum_{j=1}^{J} National\ Product_j * \left(\frac{city\ employment_j}{national\ employment_j}\right)}{Total\ City\ Population}$$

Accessibility to Open Public Area - Metadata

Source: City Prosperity Index Toolkit, UN-Habitat, 2014.

TITLE	DEFINITION	UNIT
Accessibility to Open Public Area	Percentage of urban area that is located less than 300 meters away from an open public space	%

METHODOLOGY (A & B)

A) This indicator provides information about the open public area that a city has and whether it is enough for its population. Additionally, this indicator takes into account the accessibility of people to open public areas, and the way in which total public area is distributed across the city. A prosper city has enough open public area for its population, it is properly distributed and people have easy access to it.

$$Accessibility\ to\ open\ public\ area = 100\frac{population\ less\ than\ 300m\ away\ open\ public\ area}{city\ population}$$

4 THINGS we should know and accept about INDICATORS

Source: Based on 'The Good Indicators Guide'. http://www.apho.org.uk/resource/item.aspx?RID=44584

1. **Indicators only indicate**: it will never completely capture the richness and complexity of a system. It give 'slices' of reality. It will usually not improve things much. They are designed to give 'slices' of reality. It might provide the truth, but rarely give the whole truth. Like any reductionist approach, an indicator must be understood in context.

2. **Indicators encourage explicitness**: it force us to be clear and explicit about what we are trying to do. We must face important differences in understanding which makes difficult attaining a true agreement and understanding of the work. It can help in achieving this by asking questions such as "What would success look like if we could only measure three things?"

4 THINGS we should know and accept about INDICATORS

Source: Based on 'The Good Indicators Guide'. http://www.apho.org.uk/resource/item.aspx?RID=44584

3. **Indicators usually rely on numbers and numerical technicques**: people fear numbers. In order to be able to use indicators properly or challenge them, we need a basic understanding of elementary statistics (rates, ratios, comparisons,standardisation etc). But indicators don't always use complex methods.

4. **Indicators should not be associated with fault finding**: it can help us understand our performance be it good or bad. Well-designed measurement systems identify high performers (from whom we can learn), as well as systems (or parts of systems), that may warrant further investigation and intervention.

10 Myths About INDICATORS

Source: Based on 'The Good Indicators Guide'. http://www.apho.org.uk/resource/item.aspx?RID=44584

1. The only useful indicator is one that covers the complete work of an organisation.	Unlikely. They merely indicate. Only slices of reality.
2. It is possible to design a measure that captures all that is most important about a system.	Highly unlikely. One indicator may indicate one crucial aspect.
3. Homemade indicators are best: the only indicators that are of any use are those that you design yourself.	Rarely you need to design new indicators. Ask why no one has not. You may not have comparators except itself over time.
4. You only need very few indicators to understand how a system is working.	Very unlikely. You need many slices to gain a reasonably valid understanding of the whole system.
5. Measurement eliminates uncertainty and argument.	They exist to prompt useful questions, not to offer certain answers. Promotes healthy uncertainty stimulating the right degree unbiased, informed debate.

10 Myths About INDICATORS

Source: Based on 'The Good Indicators Guide'. http://www.apho.org.uk/resource/item.aspx?RID=44584

6. Unless the data are perfect, indicator is useless.	No perfect data or perfect indicators. We must appraise the quality of the data and the subsequent indicator in context.
7. It is possible to justify the result of any indicator.	Simply finding a plausible excuse for every indicator is tactically short sighted, and strategically dangerous. Be open and honest; otherwise you will be rumbled.
8. It is acceptable to improve the indicator rather than the system.	Gaming if people will do anything to improve the result of the indicator, except address the problems it is designed to address. Risk of being accused of not engaging in the true spirit of improvement.
9. It needs to be a common event to make a useful indicator.	Qualitative data (what people think or feel), can be very powerful from even small numbers of people; focus groups often tap into important issues that surveys or administrative data collections may never reveal.
10. Only local indicators are relevant for local people.	No doubt that indicators that are relevant to local people or practitioners are more likely to be believed. Difficult to know what the results mean if you have no consistent comparators or benchmarks from elsewhere.

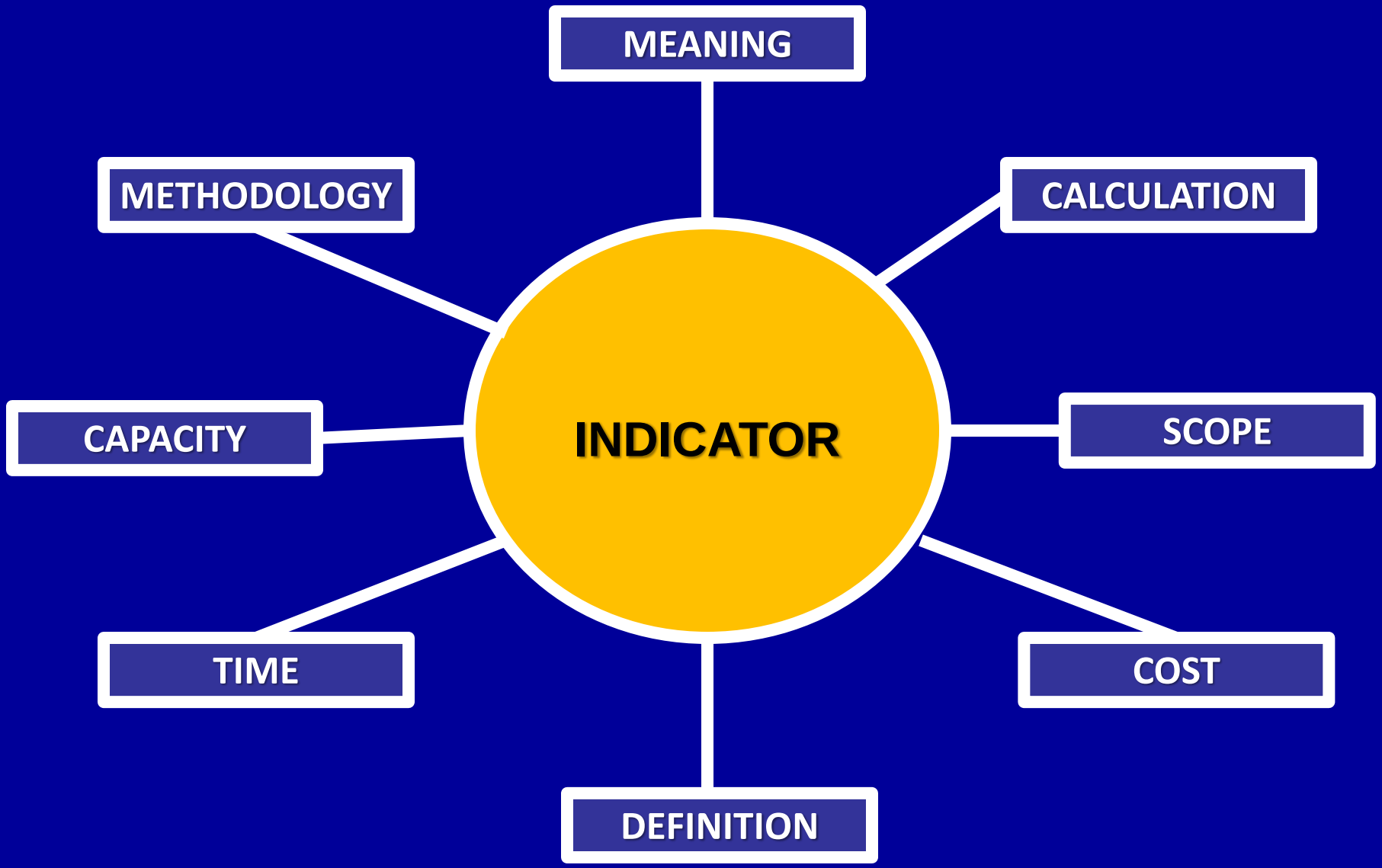
Define Your Local Indicators Set

1. Review social, economic, environmental, spatial and housing indicators that can reveal inequities, distortions and worrisome urban realities
2. Consult broadly to identify local concerns in your city in terms of equity and developmental distortions
3. Choose indicators to represent stakeholders' equity and developmental concerns and that have comparators elsewhere
4. Identify appropriate disaggregation variables for the indicators
5. Identify available data sources for these indicators and assess comparability with comparators of indicators elsewhere
6. Global, national, and local definitions for indicators and type of data collected may differ in many cases, identify similarities and differentiations

The DNA of an Indicator

1. NAME
2. DEFINITION
3. METHODOLOGY
4. GEOGRAPHY (area /scope of concern)
5. Timeliness (data collection)
6. What it purports to measure?
7. RATIONALE (Why is it important ?
8. Reason to include this indicator (valid, meaningful, possible to communicate)
9. Policy relevance (relates and responds to particular policy framework)
10. INTEPRETATION (what a high and low measure means)

Capacity to collect, retrieve, analyse and keep regularity is critical

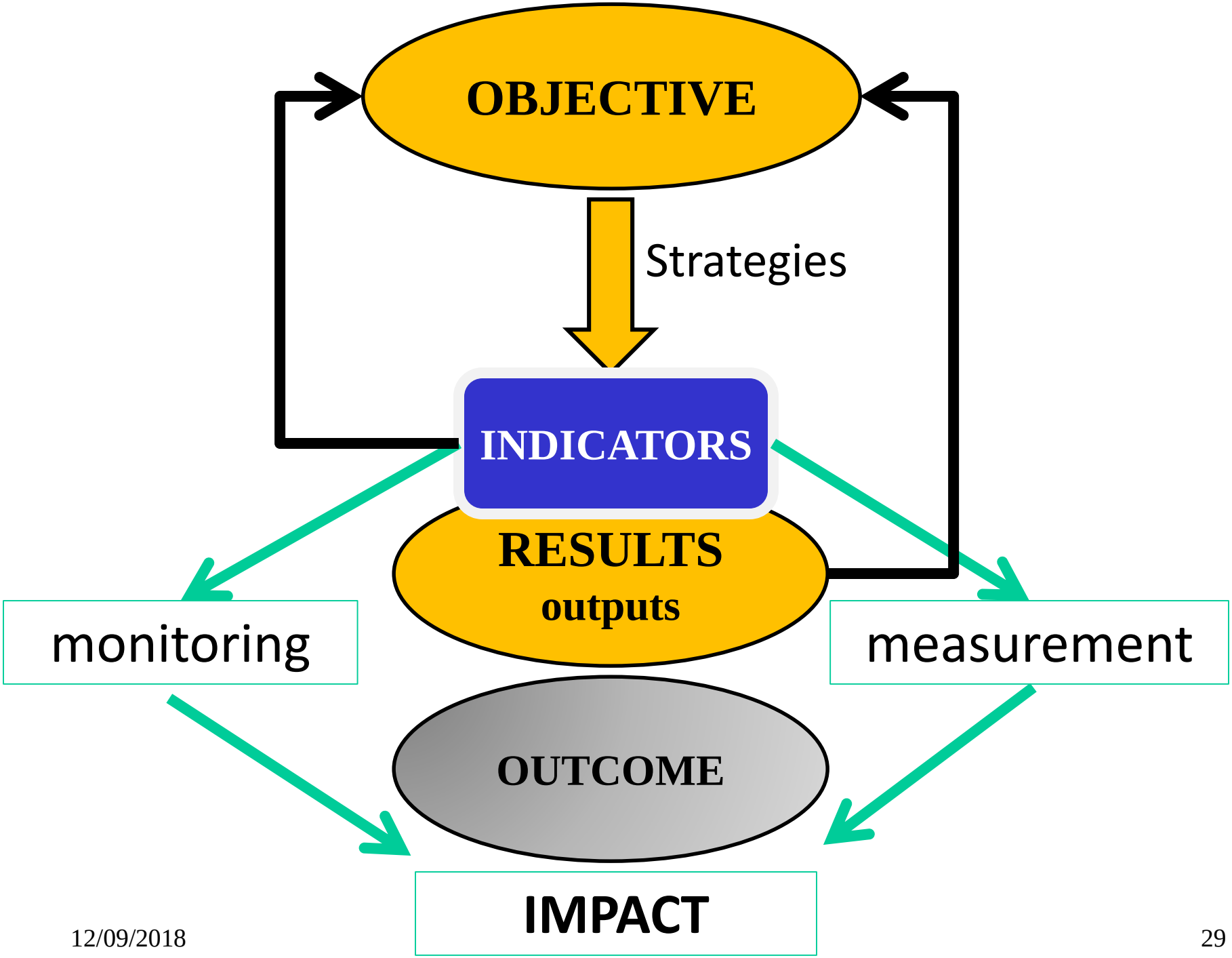

MEANING
METHODOLOGY
CALCULATION
CAPACITY
INDICATOR
SCOPE
TIME
COST
DEFINITION

Benchmarking

Very important when defining indicators: set baseline marks for performance assessment and define values and standards on which to evaluate achievements

- **External benchmarking**: Assesses performance based on normative international or national standards e.g. MDGs or national health objectives

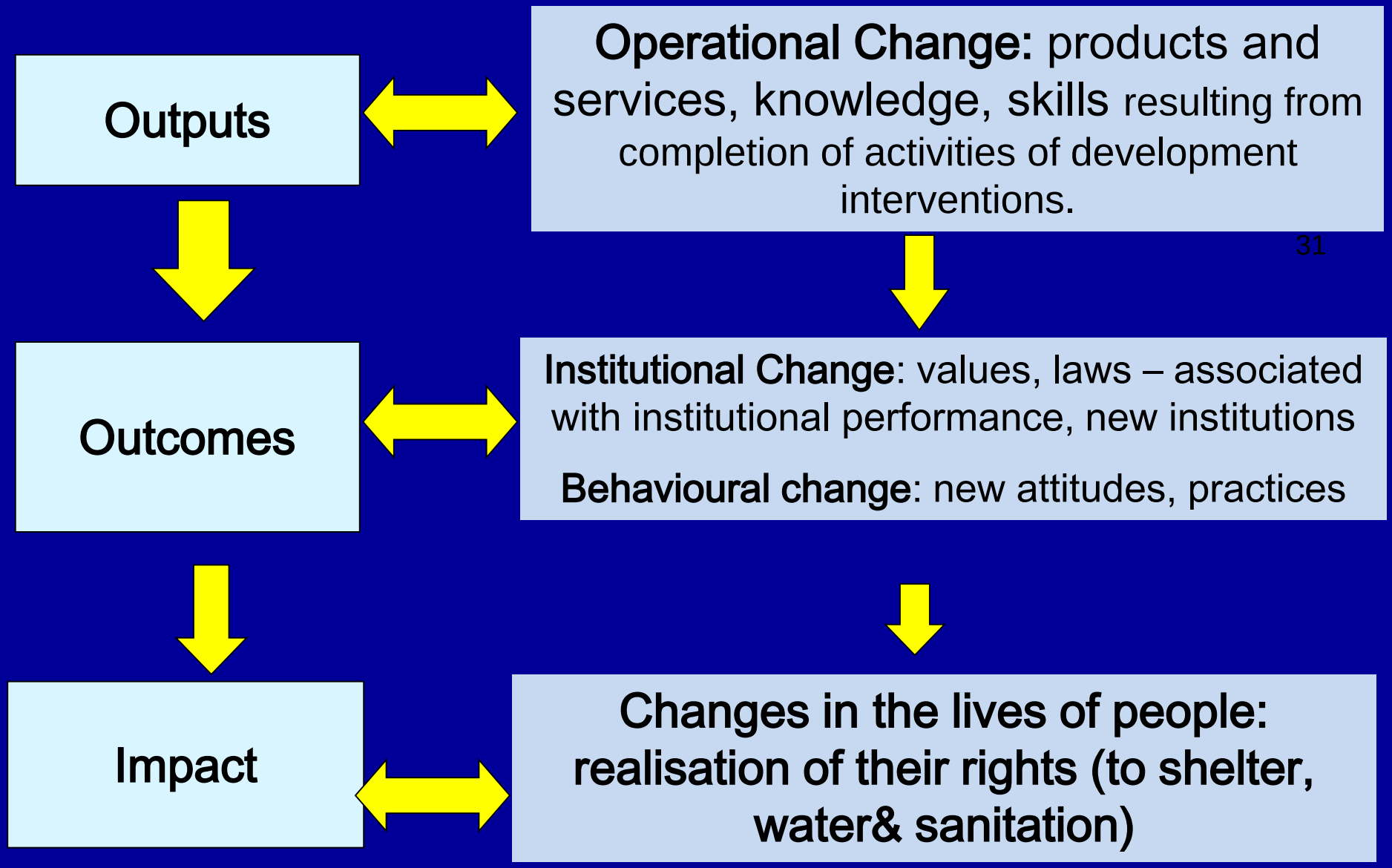
- **Internal benchmarking**: Assesses performance of a city or urban area based on its previous performance by plotting progress within a time period


OBJECTIVE
Strategies
INDICATORS
RESULTS
outputs
monitoring
measurement
OUTCOME
IMPACT

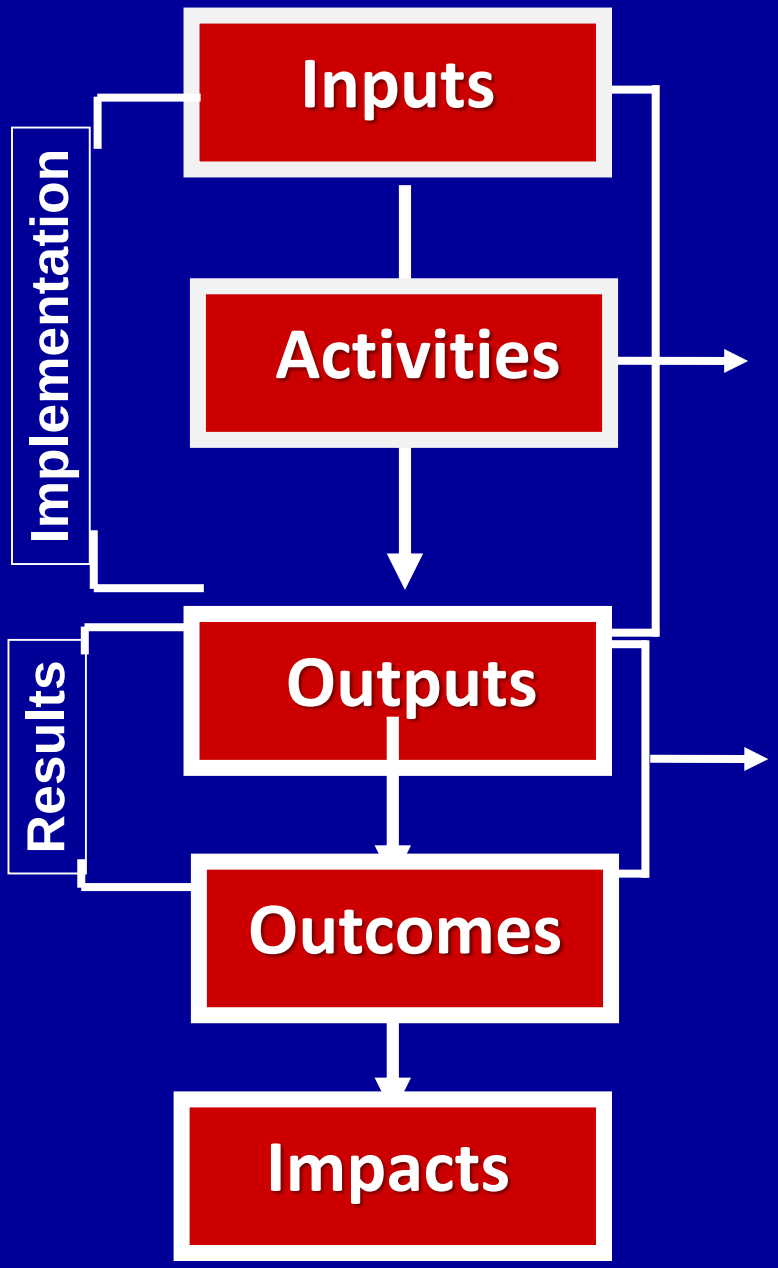
Public Policies on Cities

1. Different policies
2. Different approaches
3. Different strategies
4. Diverse results and outcomes
5. **A wide range of impacts on:**
   a. People
   b. city form,
   c. environment,
   d. housing prices,
   e. accessibility to jobs,
   f. land markets,
   g. Businesses
   h. Mobility
   i. Transportation
   j. Quality of life

Types of Change



Levels and Types of Results



These three levels are the-

The Means

The End

OECD Definitions (2002)

Impacts

- **Negative or positive** primary and secondary long-term effects produced by a development intervention directly or indirectly intended.

Outcome

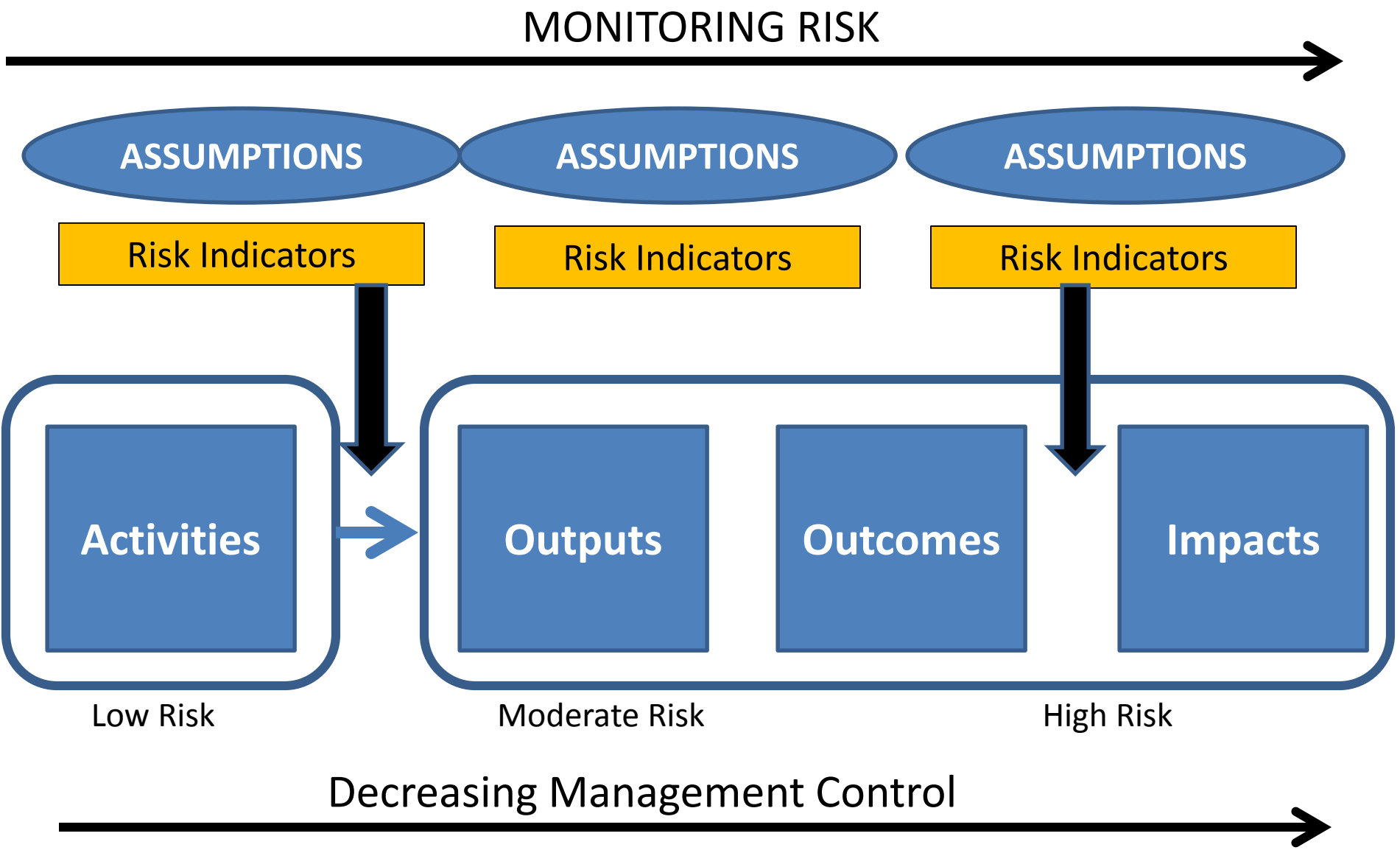
- The likely or achieved short-term and medium term effects of an intervention's outputs.

Outputs

- The **products, capital goods and services** which results from development interventions; may also include changes resulting from the interventions which are relevant to the achievement of outcomes.

Source OECD-DAC (2002)

Assessing & Monitoring Risks



In-class Exercise

1. Define a set of 5 indicators to inform about the ecological footprint of your city (or a city selected by your team).
2. Give the name and meaning of each indicator.
3. Elaborate on what these indicators are comprised of and the type of data and information that are required.
4. Present an argument why you have prioritized these indicators.
5. List 5 obstacles that the collection and analysis of the information required for these indicators are likely to face.

2.

UN-Habitat and Global Data:

An arsenal of indicators & information to support analysis, predictions, forecasting and indentification of areas for present and future concern.

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The Global Urban Observatory: GUO

- Urban Indicator programme
- Urban Observatory
- Urban Info System
- GIS (Geographical Information System)

Urban Indicator Programme

Habitat Agenda: chapters, goals & indicators

- 1 Shelter
- 2 Social development
- 3 Environmental management
- 4 Economic development
- 5 Governance

20 key indicators
9 check-list indicators
13 extensive indicators

Global Urban Indicators (Methodology)

Chapter → **Goal (s)** → **Indicator (s)**

1 Shelter

1. Promote the right to adequate housing
2. Provide security of tenure
3. Provide equal access to land
4. Promote equal access to credit
5. Promote access to basic services

Indicator 1. Durable Structures
Indicator 2. Overcrowding
Qualitative data: right to adequate housing
Indicator: house price and rent / income

Urban Indicator Programme

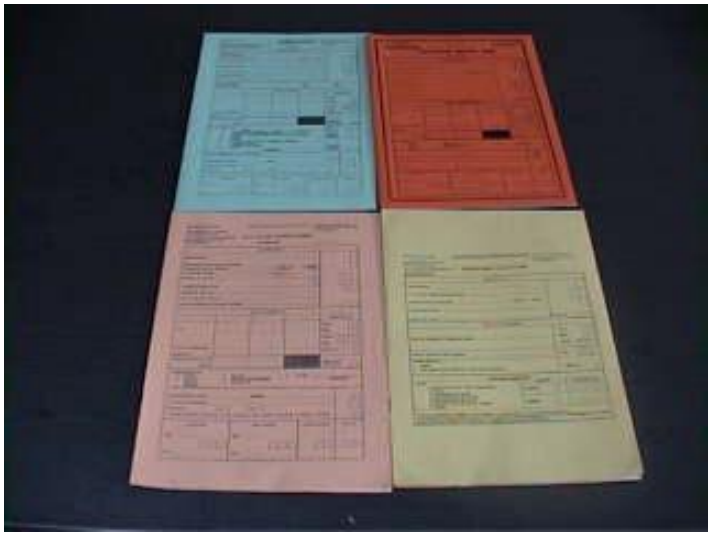
- **Monitoring tools and instruments: UIS**

Satellite image/GIS

Community profile

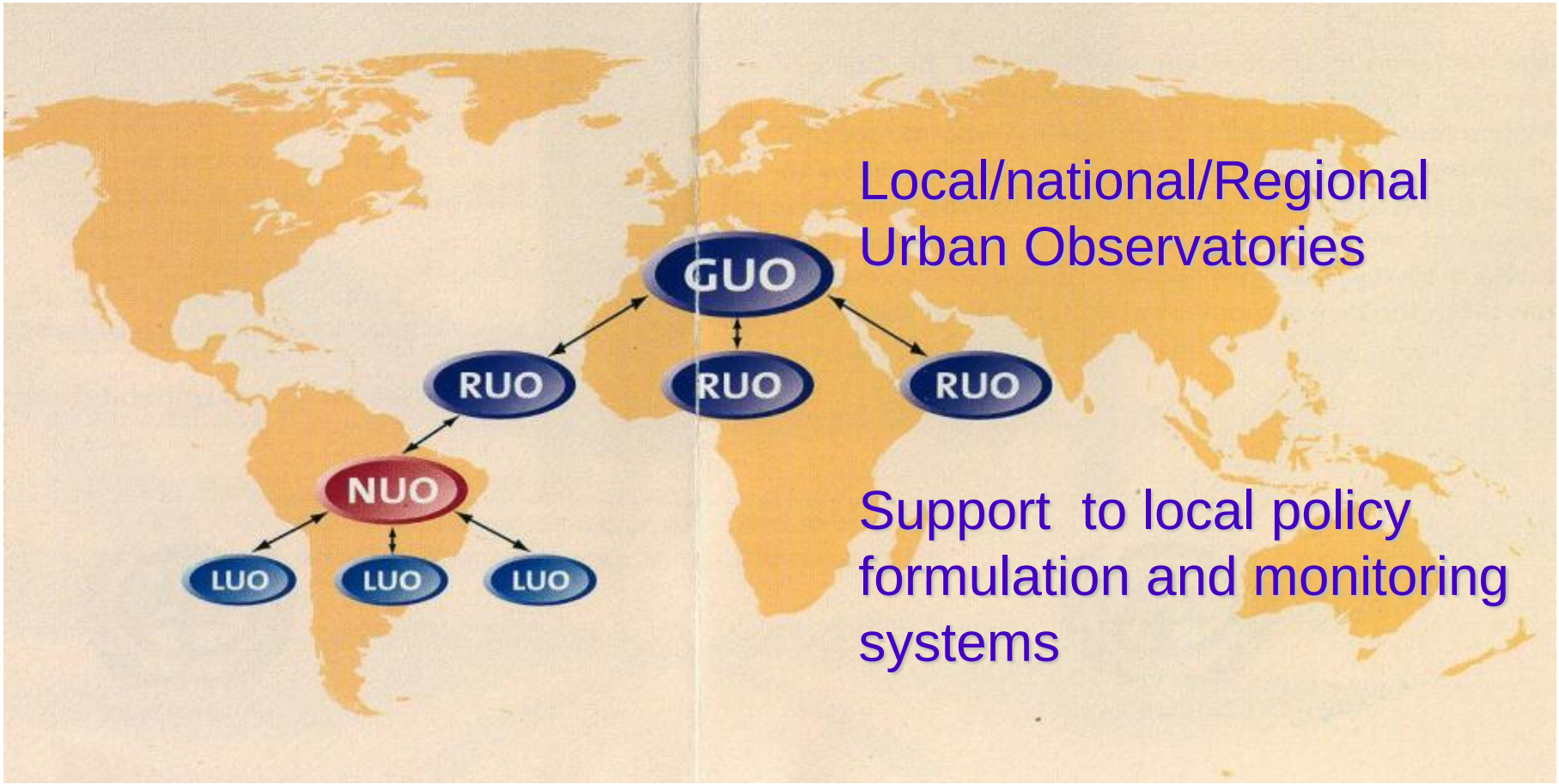
Household questionnaire

Woman/child questionnaire



Urban Observatory

Global Monitoring of Urban Agenda: Supporting local and national urban observatories



Working at different levels of the planning process

REGIONAL/CITY LEVEL DATA

- Settlement location/size
- Land use & environmental analysis
- Infrastructure layout
- Relation with other city uses.

SETTLEMENT LEVEL DATA

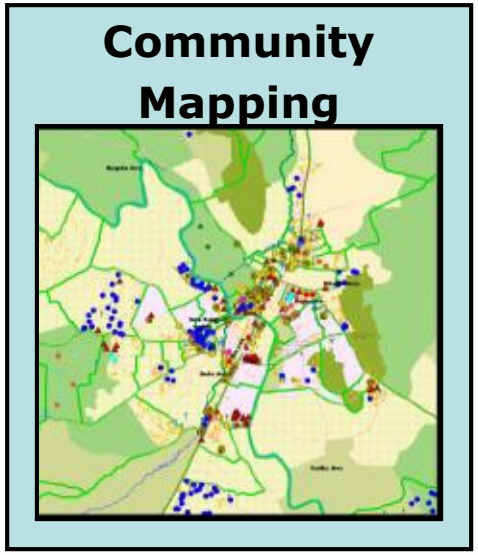
- Infrastructure availability
- Structure type and numbers
- Population size and density
- Land use / spatial changes
- Environmental and impact analysis

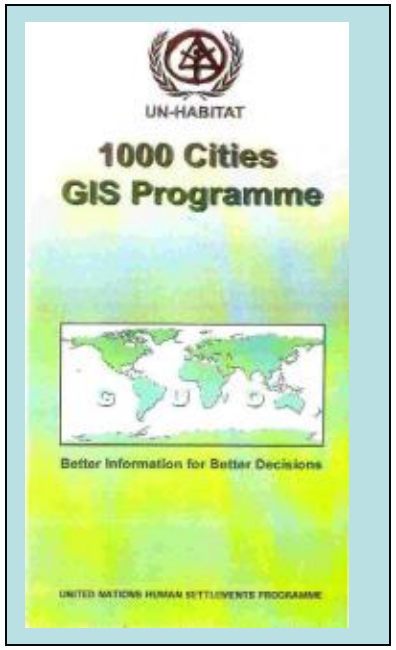
HOUSEHOLD LEVEL

- Socio-economic data
- Vulnerability and well being status
- Access to basic services
- Housing conditions

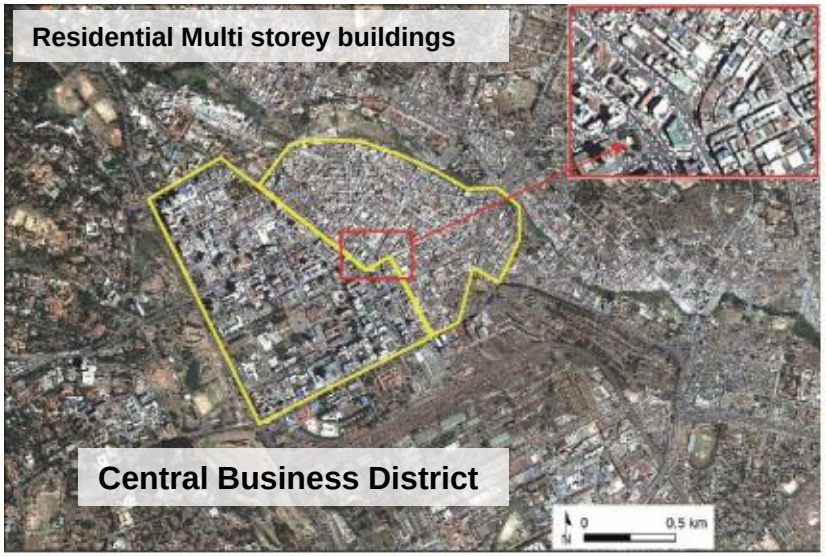
GIS Programme (Digital Mapping)

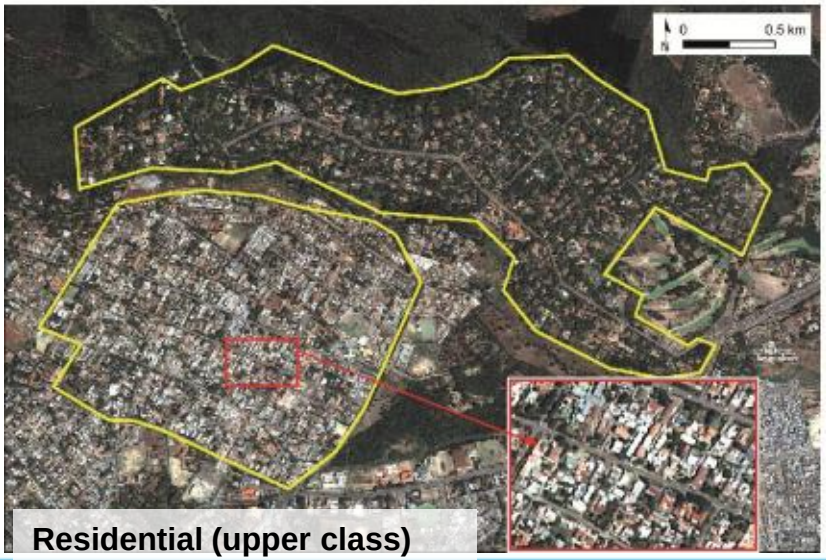
- 1000 cities GIS programme (ESRI)
- Global Slum Mapping (EU)
- GED 4 GEM (EU)
- GIS for LUO
- Community Mapping

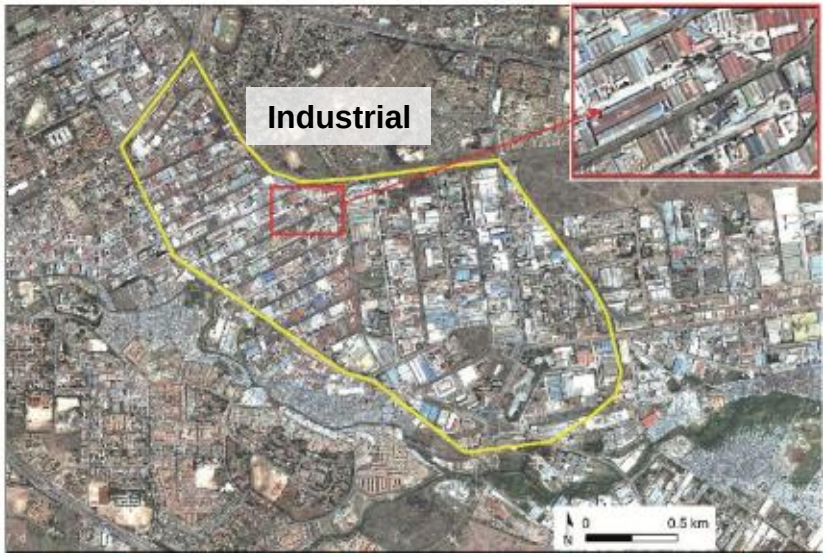




Examples for built-up types in Nairobi







Residential

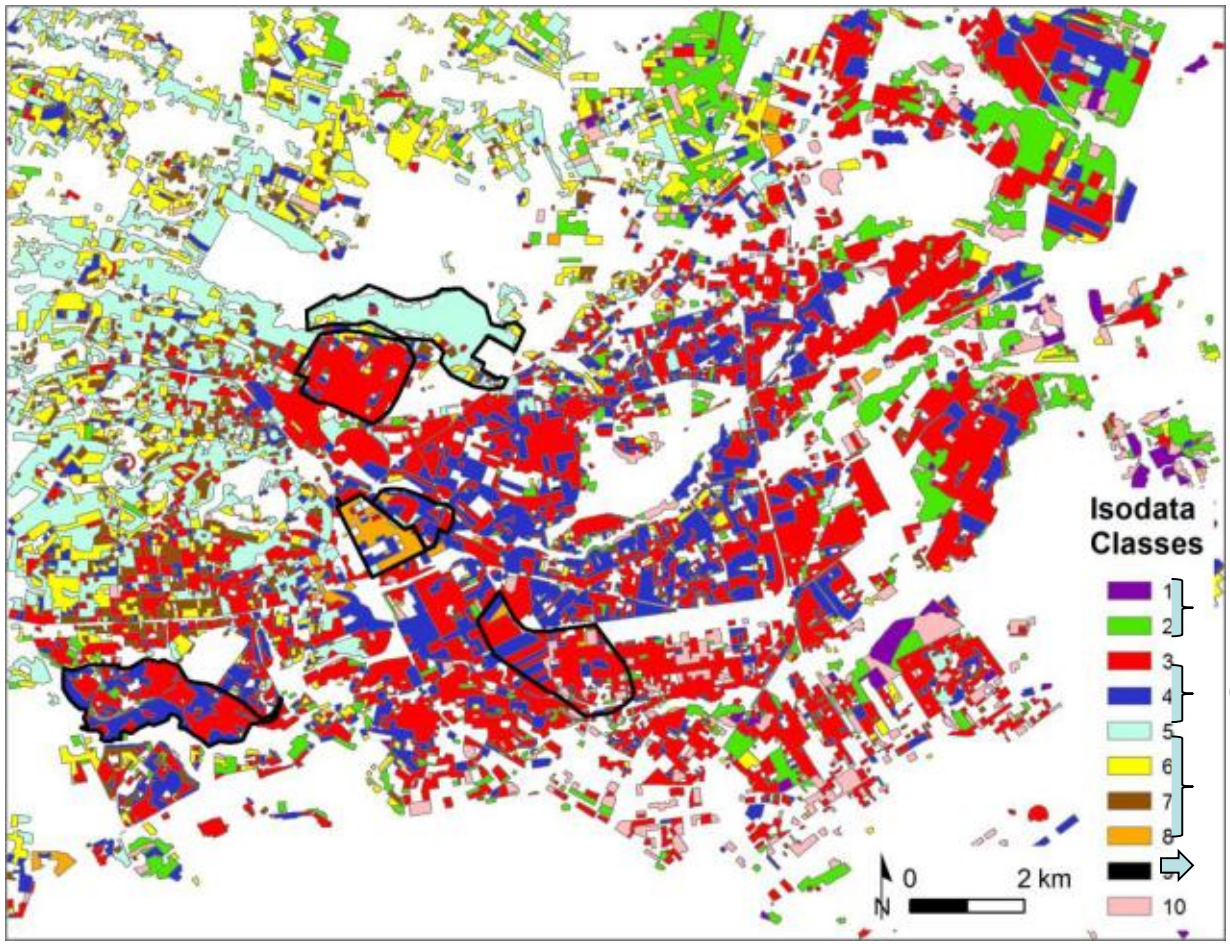
Slum

Road

Industrial

Digital Mapping Using High Resolution satellite Imagery

Unsupervised classification on High Resolution Satellite Imagery: Automated process



Least dense classes (outskirts)

Comprise most of the poor residential & slum areas

High rise buildings (CBD)

Road Network

History of urban Indicators to monitor Habitat Agenda

- 1993
- 46 key indicators
- 237 Cities

- 1998
- 23 key indicators
- 242 Cities

- 2003, 1990-2005
- 20 key indicators
- 353 Cities

A five year production cycle, followed by a continuous monitoring mechanism

UN-HABITAT

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The Global Urban Indicators Database

- **GUID 3**
- 2003 data
- 20 key indicators
- 353 Cities

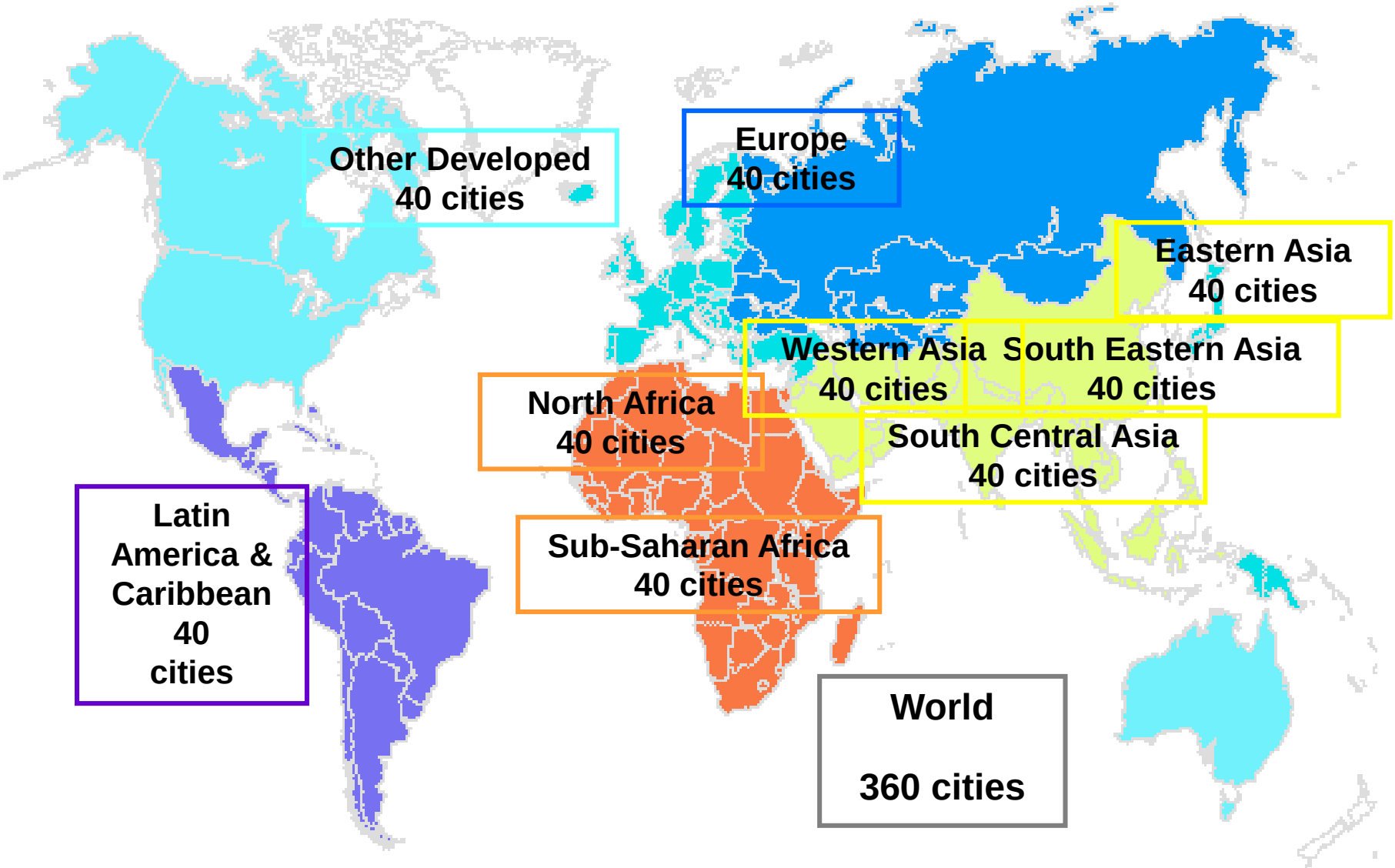
- **GUID 2008**
- Years prior to 2008

20+Key indicators
1000+ cities

- **GUID 2010**
- Years prior to 2010
- 20+key indicators
- 1000+ cities

A two year production cycle

Global sample of 360 cities Worldwide representative 40 cities per UN region



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Information
Organization
Product

Data
Search

Gallery
Presentation
Images

Help
Contents
Tour

UrbanInfo

United Nations Human Settlements Programme

UN-HABITAT

Show on startup

Indicator Time Area Data

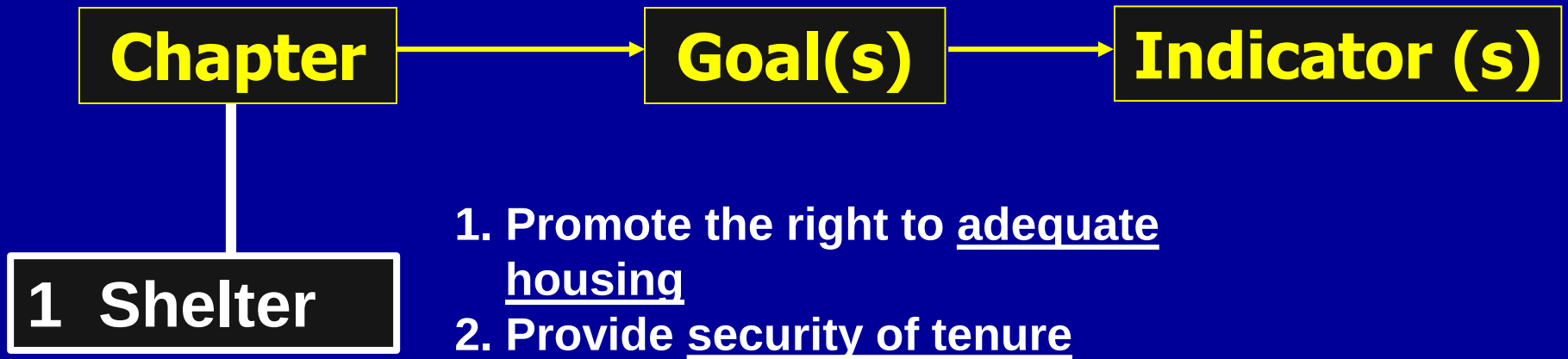
15/08/2006 10:38 AM

3.

THE HABITAT AGENDA (1996):

UN-Habitat is mandated to monitor its implementation, develop indicators and report on progress of its implementation

Habitat Agenda indicators framework



1. Promote the right to adequate housing
2. Provide security of tenure
3. Provide equal access to land
4. Promote equal access to credit
5. Promote access to basic services

- Indicator 1. Durable Structures
- Indicator 2. Overcrowding
- Qualitative data: right to adequate housing
- Extensive Indicator: house price and rent / income

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Shelter	Promote the right to adequate housing	Key indicator 1: durable structures Key indicator 2: overcrowding
	Provide security of tenure	Key indicator 3: secure tenure
	Promote access to basic services	Key indicator 4: access to safe water Key indicator 5: access to improved sanitation Key indicator 6: connection to services
Social development and eradication of poverty	Provide equal opportunities for a safe and healthy life	Key indicator 7: under-five mortality Key indicator 8: homicides
	Promote social integration and support disadvantaged groups	Key indicator 9: poor households
	Promote gender equality in human settlements development	Key indicator 10: literacy rates
Environmental Management	Promote geographically-balanced settlement structures	Key indicator 11: urban population growth Key indicator 12: planned settlements
	Manage supply and demand for water in an effective manner	Key indicator 13: price of water
	Reduce urban pollution	Key indicator 14: wastewater treated Key indicator 15: solid waste disposal
	Promote effective and environmentally sound transportation systems	Key indicator 16: travel time
Economic Development	Strengthen small and micro-enterprises, particularly those developed by women	Key indicator 17: informal employment
	Encourage public-private sector partnership and stimulate productive	Key indicator 18: city product Key indicator 19: unemployment
Governance	Promote decentralization and strengthen local authorities	Key indicator 20: local government revenue

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Habitat Agenda: chapters, goals and indicators

- **1 Shelter**
- **2 Social development**
- **3 Environmental management**
- **4 Economic development**
- **5 Governance**

20 key indicators +
9 check-list +
13 extensive indicators

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Habitat Agenda Indicators

Chapter/ Habitat Agenda goals	Indicators	Cluster
1. Shelter		
Promote the right to adequate housing	Key indicator 1: durable structures Key indicator 2: overcrowding check-list 1: right to adequate housing extensive indicator 1: housing price and rent-to-income	
Provide security of tenure	Key indicator 3: secure tenure extensive indicator 2: authorized housing extensive indicator 3: evictions	
Provide equal access to credit	check-list 2: housing finance	
Provide equal access to land	extensive indicator 4: land price-to-income	

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Chapter/ Habitat Agenda goals	Indicators	Cluster
Promote access to basic services	Key indicator 4: access to safe water Key indicator 5: access to improved sanitation Key indicator 6: connection to services	
2. Social development and eradication of poverty		
Provide equal opportunities for a safe and healthy life	Key indicator 7: under-five mortality Key indicator 8: homicides check-list 3: urban violence extensive indicator 5: HIV prevalence	
Promote social integration and support disadvantaged groups	Key indicator 9: poor households	
Promote gender equality in human settlements development	Key indicator 10: literacy rates check-list 4: gender inclusion extensive indicator 6: school enrolment extensive indicator 7: women councilors	

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Habitat Agenda Indicators

Chapter/ Habitat Agenda goals	Indicators	Cluster
3. Environmental Management		
Promote geographically-balanced settlement structures	Key indicator 11: urban population growth Key indicator 12: planned settlements	
Manage supply and demand for water in an effective manner	Key indicator 13: price of water extensive indicator 8: water consumption	
Reduce urban pollution	Key indicator 14: wastewater treated Key indicator 15: solid waste disposal extensive indicator 9: regular solid waste collection	
Prevent disasters and rebuild settlements	check-list 5: disaster prevention and mitigation instruments extensive indicator 10: houses in hazardous locations	

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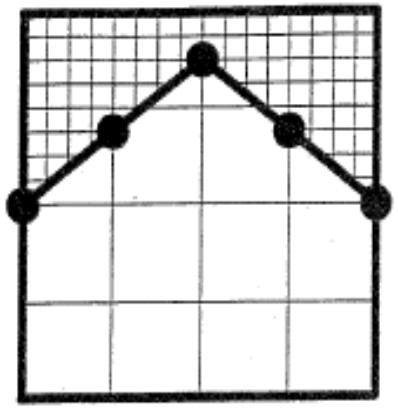

HOUSING INDICATORS PROGRAMME

Enabling Policies and Their Effects on Housing Sector Performance: A Global Comparison

Shlomo Angel and Stephen K. Mayo

Habitat II

Istanbul, Turkey

June 11, 1996

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HOUSING INDICATORS PROGRAMME

- UN-HABITAT (UNCHS) with support from World Bank, Finnish International Development Agency, USAID.
- 1990-1992: development of set of indicators, research and surveys, training of field staff/consultants, testing, expert meetings, calibration and reporting
- Conceptual and analytical framework to analyse the performance of the housing sector
- Empirical evidence to support housing policy development and steer informed decision-making

- Indicators: **price, quantity, quality, demand, supply**

- **IMPORTANT: policy implications!**

HOUSING INDICATORS

TYPE OF INDICATOR	KEY HOUSING INDICATOR	MEANING	LOW	MEDIAn	HIGH	INTERPRETATIONS
PRICE INDICATORS	1. The house-price-to-income ratio 2. The rent-price-to-income ratio	Ratio of the median free market price of a dwelling unit and the median annual household income. Ratio of the median annual rent of dwelling unit and the median annual household income of renters	0.9 0.03	5.0 0.18	14.8 0.38	It measures housing affordability. If high, system is restricted. If low, insecurity of tenure. Also a key to check housing affordability. If low, rent control measures. If high, rental housing failing to meet demand.
QUANTITY INDICATORS	3. Housing production 4. Housing Investment	Total number of housing units (formal & informal) produced last year per 1000 population. Total investment in housing (formal & informal), as percentage of gross city product.	2.0 0.009	6.8 0.04	14 0.088	Measures the importance of housing sector to broader economy. Ability of the delivery systems. Reflects quantities produced and prices. A given value may reflect either high unit costs and low volumes or low costs and high volumes of production.
QUALITY INDICATORS	5. Floor Area per person 6. Permanent structures 7. Unauthorized Housing	The median usable living space per person (m^2) last year. The percentage of housing units located in structures built of permanent materials. Percentage of the total housing stock that is not compliance with current regulations.	4 0.43 0.0	33 0.90 0.24	69 1.0 0.78	Low value is sign of overcrowding. Measures quality of housing, durability. Primitive measure of housing adequacy. Unauthorized housing decreases sharply with economic development.

HOUSING INDICATORS PROGRAMME

TYPE OF INDICATOR	KEY HOUSING INDICATOR	MEANING	LOW	MEDIAN	HIGH	INTERPRETATIONS
DEMAND-SIDE INDICATORS	8. The housing credit portfolio	The ratio of total mortgage loans to all outstanding loans in both commercial and governmental institutions.	0.01	0.18	0.44	Measures the relative size of housing finance sector and its ability to provide households with $ to purchase housing.
SUPPLY-SIDE INDICATORS	9. The land development multiplier 10. Infrastructure expenditures per capita	Average ratio between the median land price of a developed plot at the urban fringe in typical subdivision and the median price of raw, undeveloped land in an area currently being developed. The ratio of total expenditures (operations, maintenance and $), by all levels of government on infrastructure services (roads, sewerage, drainage, water supply, electricity, garbage collection) during the current year to the urban population). Median is $73. Median for low income countries is $15. Median for high income countries is $814 or 54 times as high. It is equivalent to the factor that per capita incomes	1.1 0.98	5.2 318	16.6 2,201	Measures premium for providing infrastructure and converting raw land to residential use on the urban fringe. It Is an indirect measure of the supply of infrastructure for residential development. If low, land-supply bottlenecks and higher prices of land and housing.

5.

The Millennium Development Goal 7/11:

UN-Habitat mandated to monitor and measure the achievement of MDG 7/11 that focuses on the improvement of the lives of at least 100 million slum dwellers

What is a Slum Dweller according to UN-HABITAT?

An operational definition.

Lacks one or more of the following:

1. Access to improved sanitation
2. Access to improved water
3. Access to security of tenure
4. Durability of Housing
5. Access to sufficient living areas

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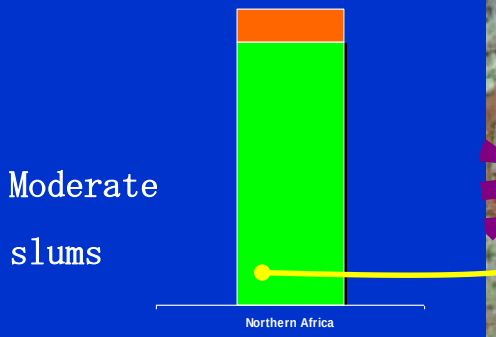
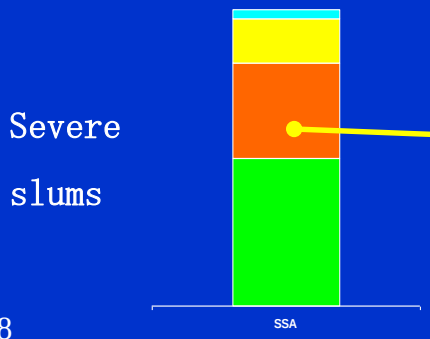
3. Counting Shelter Deprivations

- Access to improved water
- Access to improved sanitation
- Sufficient living area
- Durability of housing

Identifying slum areas

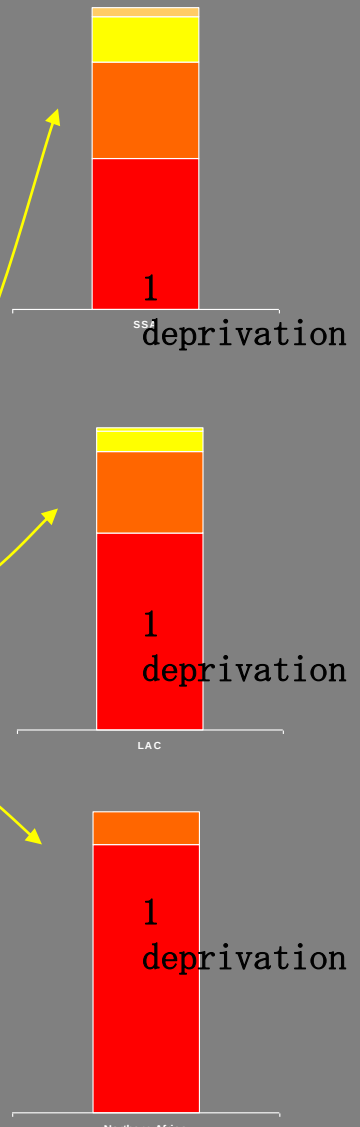




The State of the World's Slums

Not all slum dwellers suffer the same degree of deprivation

Region	1	2	3	4
Sub-Saharan A	50	32	15	3
LAC	65	27	7	1
Northern Africa	89	11	0	0



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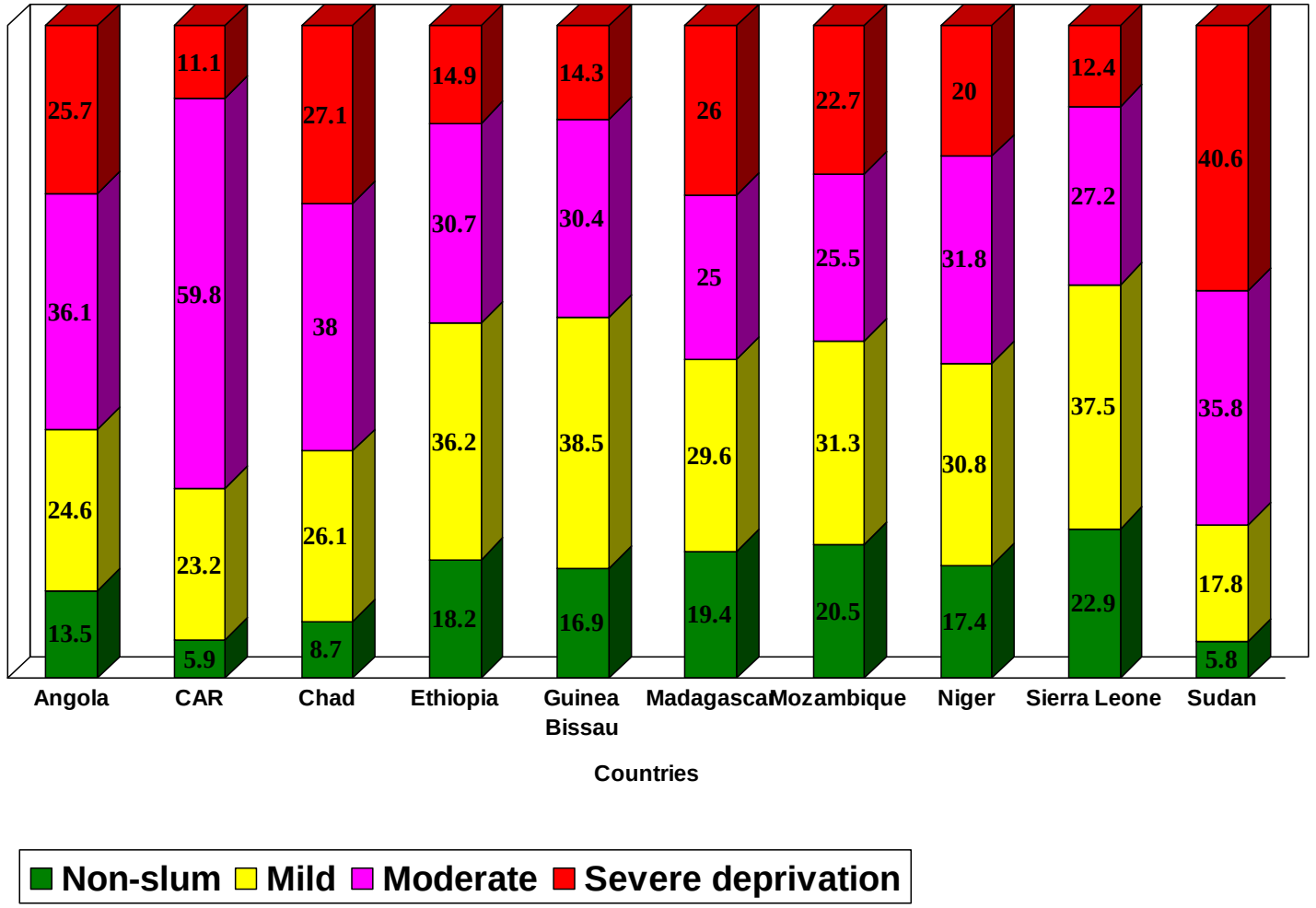
Countries with multiple shelter deprivations Sub-Saharan Africa



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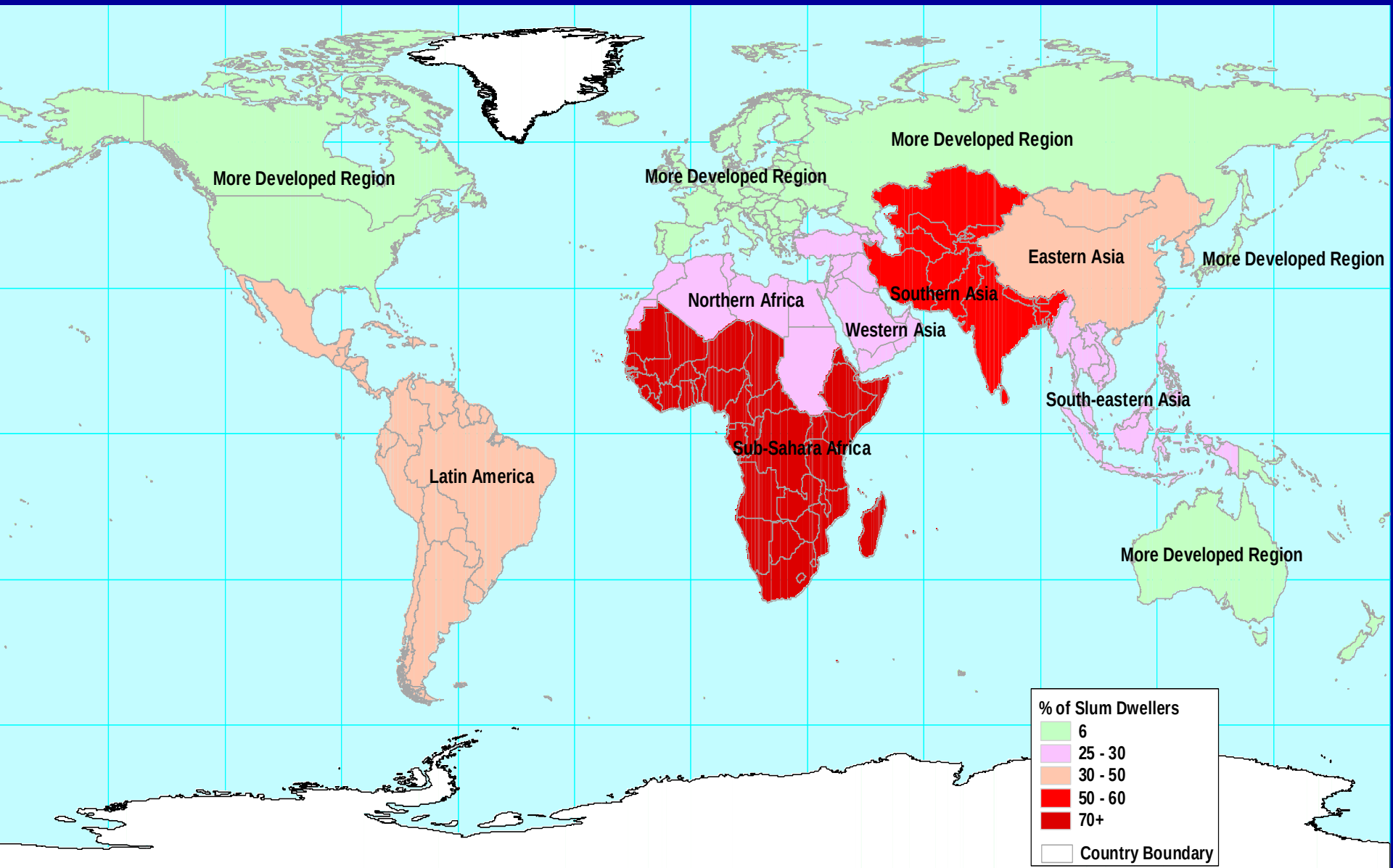
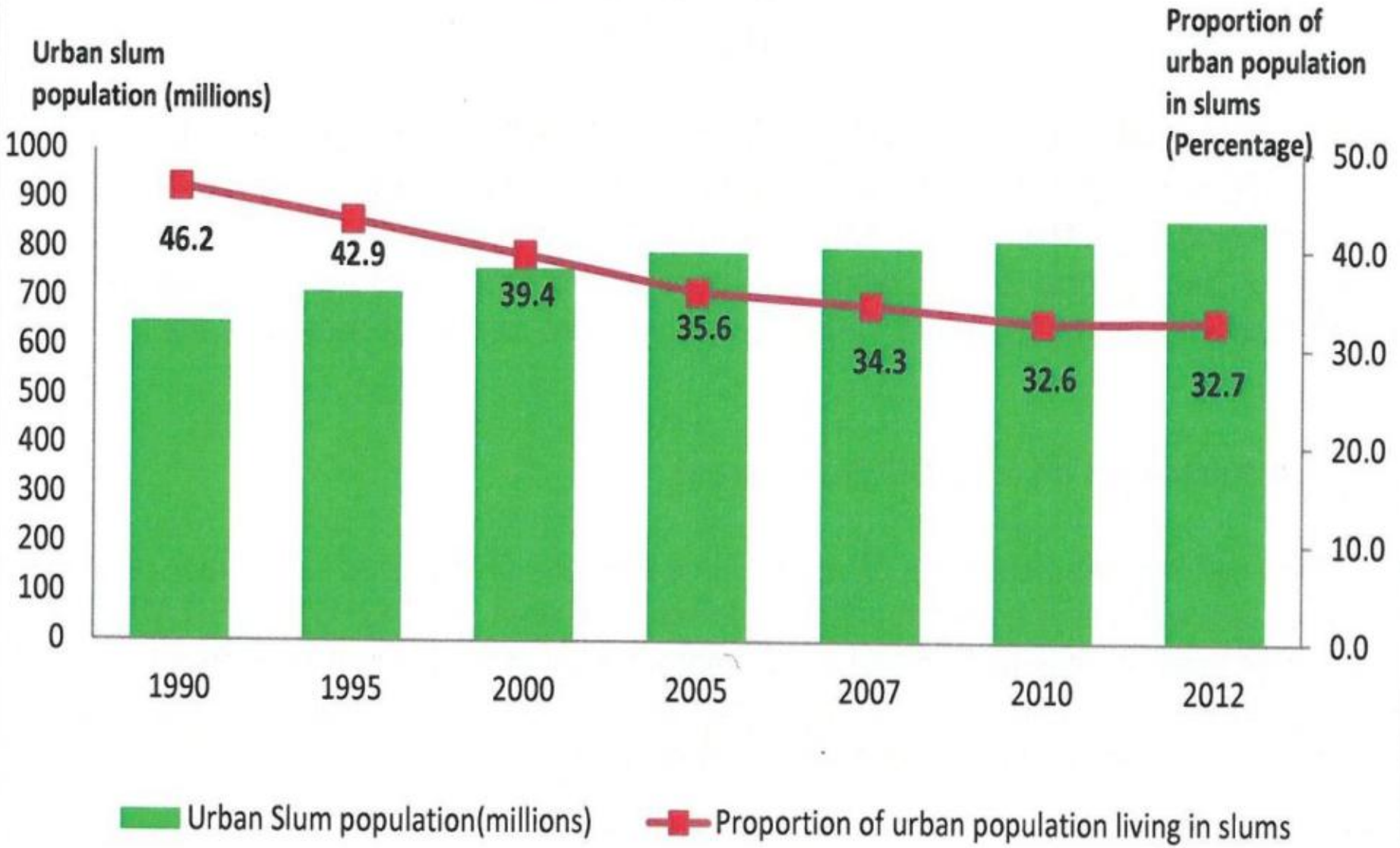
Proportion of Slum Dwellers in Urban Areas by Region: 2005

Source: UN-HABITAT, 2008



Population living in slums and proportion of urban population living in slums, developing regions, 1990-2012



Informal and Unplanned Urbanization:
the predominant form of urban growth

	Urban Growth	Slum formation
Sub-Saharan Africa	4.6	4.5
Southern Asia	2.9	2.2
Western Asia	2.9	2.7

Source: UN-HABITAT, 2008

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6

Ability to Monitor and Analyze Global Trends and the State of Urbanization in the World:

unpacking the scale and scope of the problem of urbanisation and slums.

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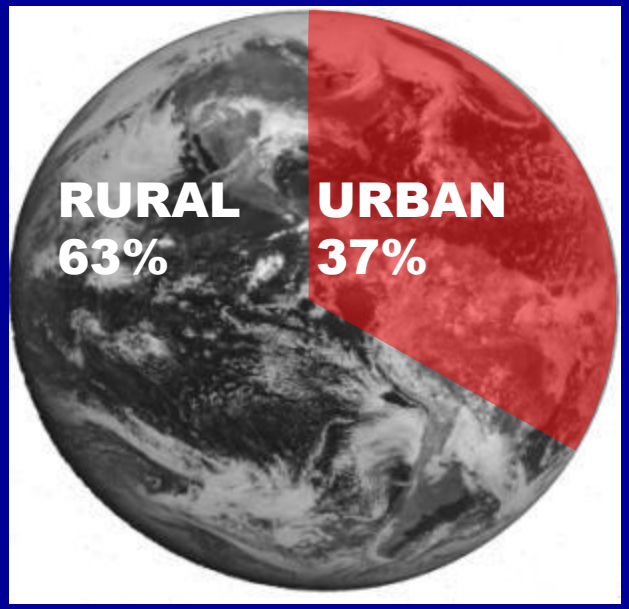
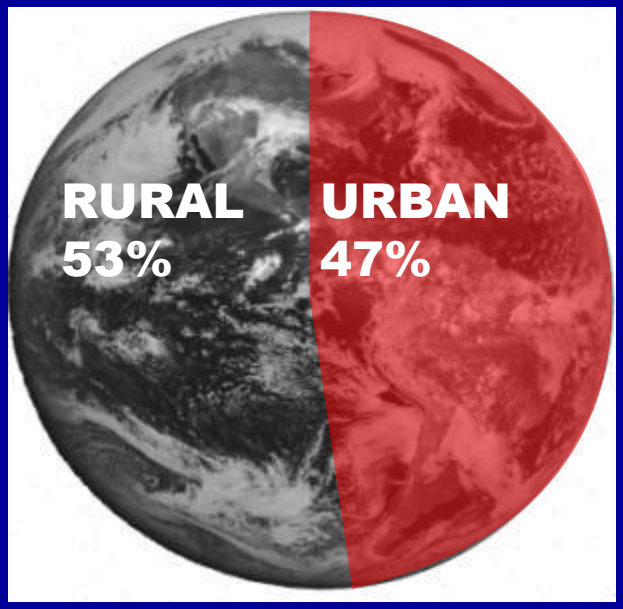
RAPID URBANIZATION

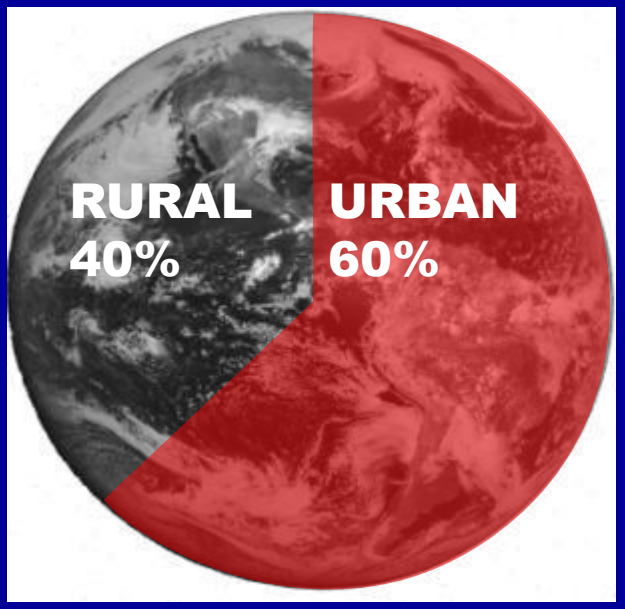
GLOBAL POPULATION RURAL/URBAN



1970



2000



2030

Source: UN-HABITAT, 2008

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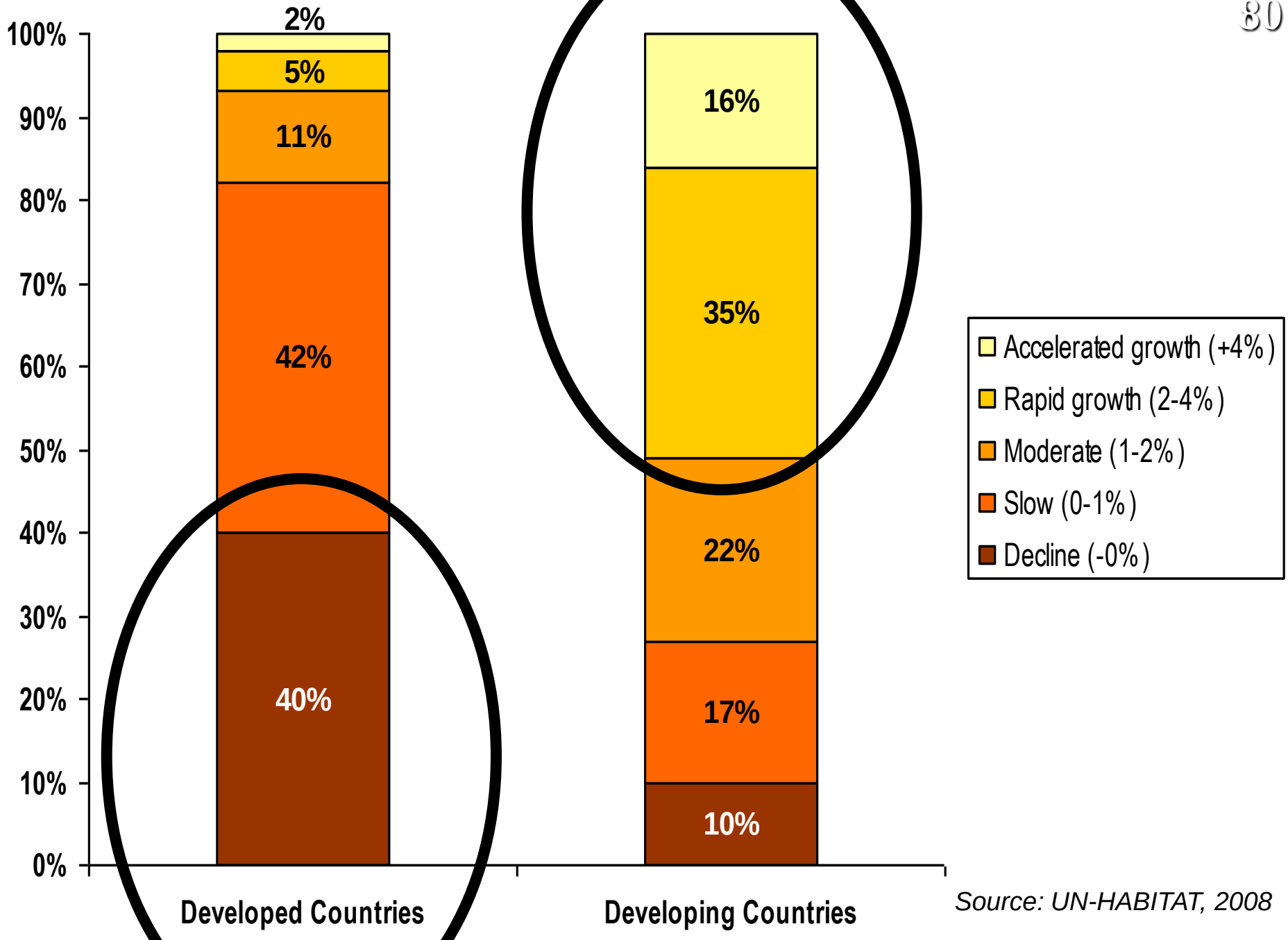
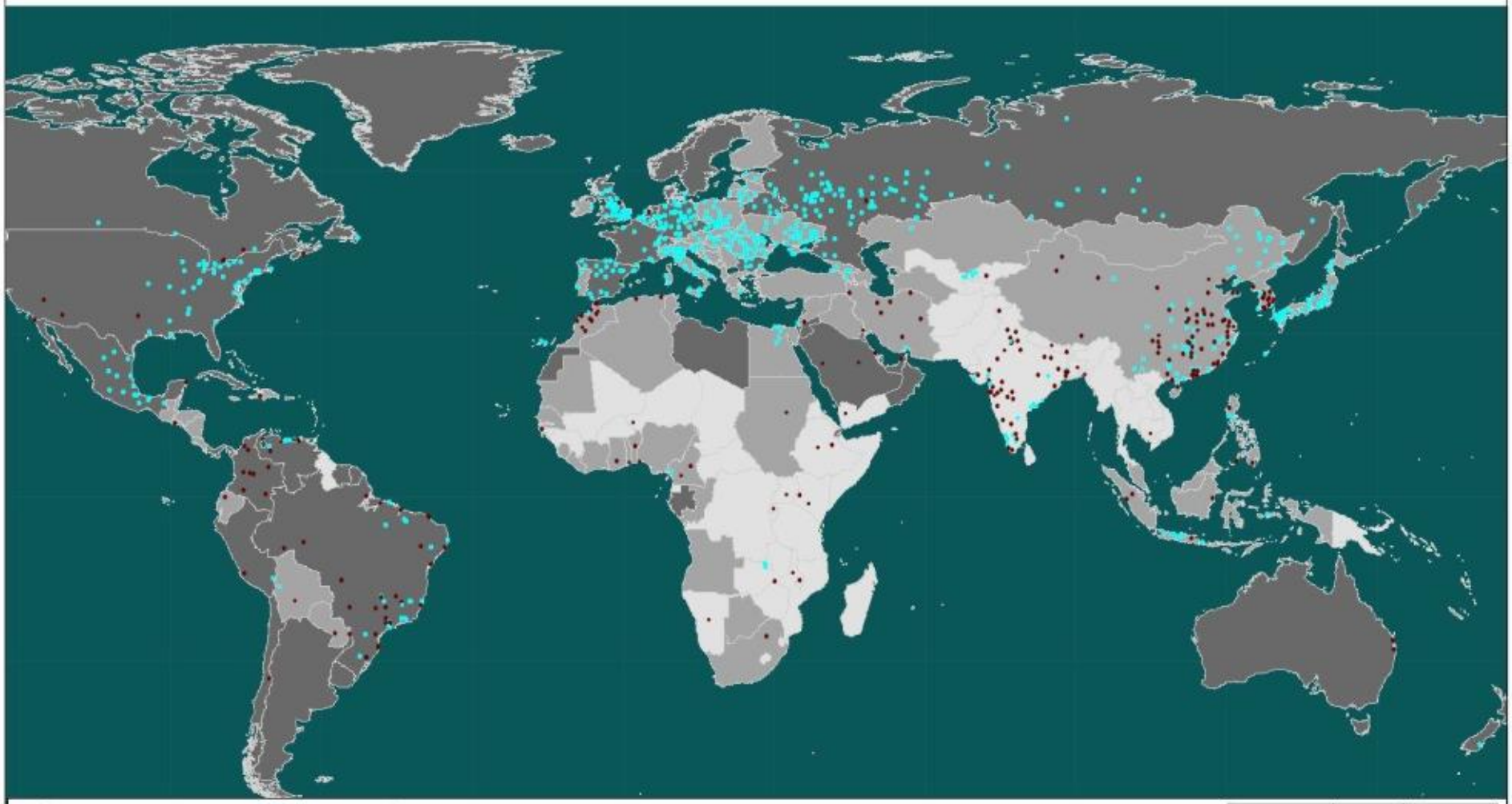


Source: UN-HABITAT, 2008

Population Growth and Decline of The World's Cities



Source: UN-HABITAT, 2008

TIME TO THINK URBAN

URBAN STATISTICS 2013

WORLD
Total Population: **7 billion**
Urban: **3.6 billion (52%)**
Slums: **862.5 million (24%)**

AFRICA
Total Population: **1 billion**
Urban: **413 million (40%)**
Slums: **225.9 million (51%)**

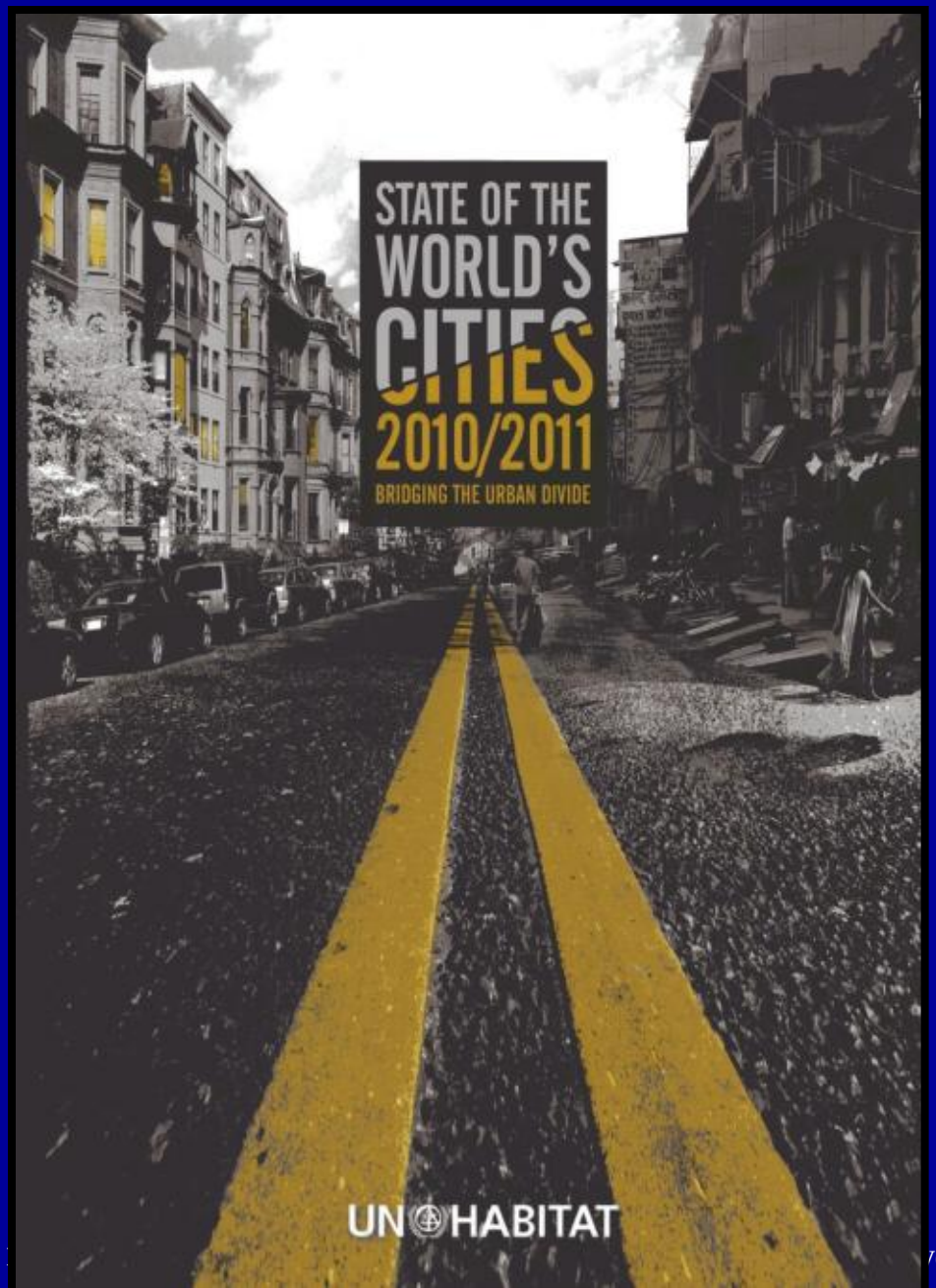
LATIN AMERICA
Total Population: **596 million**
Urban: **472 million (79%)**
Slums: **113.4 million (23.5%)**

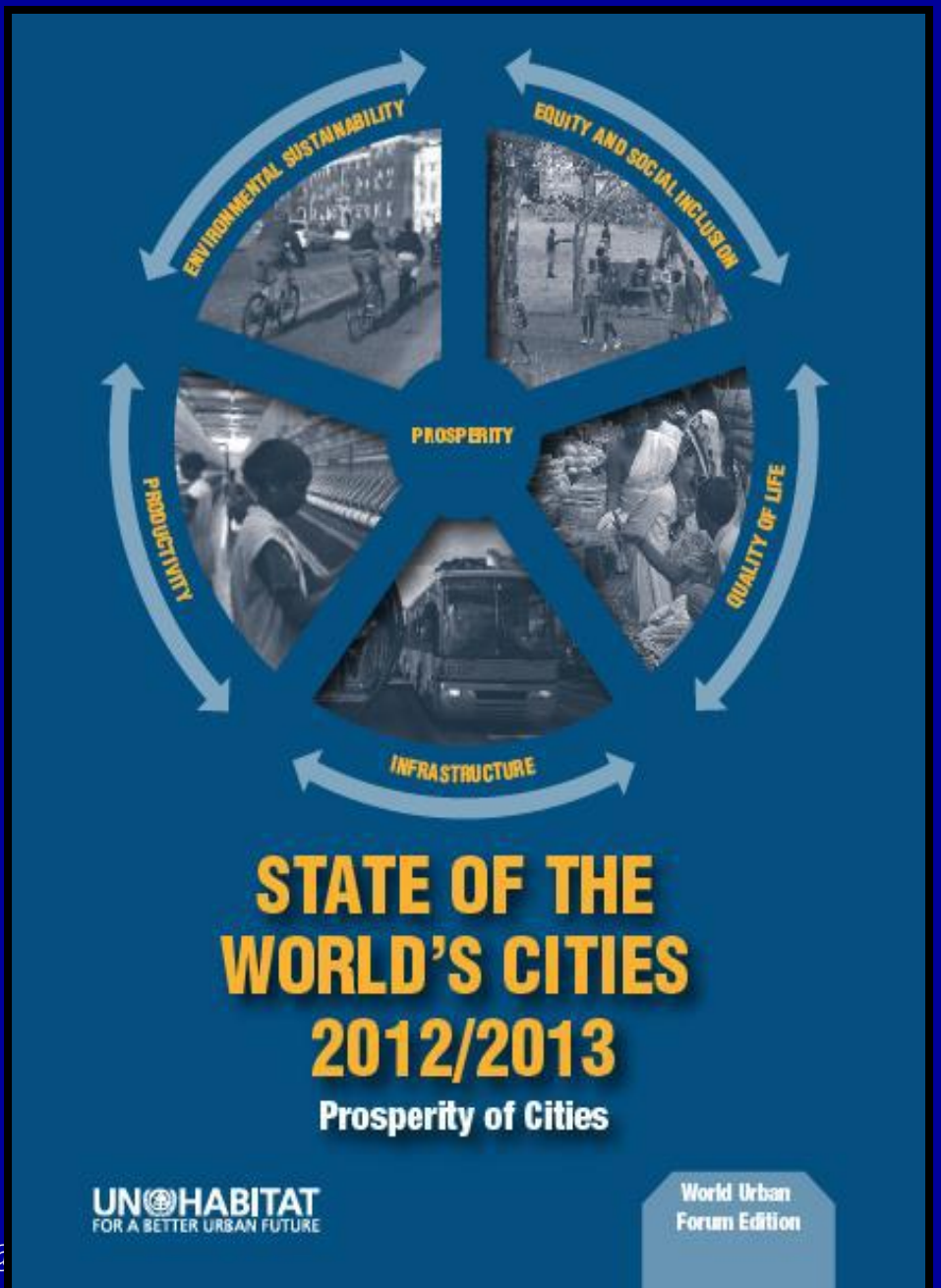
ASIA
Total Population: **4.2 billion**
Urban: **1.9 billion (45%)**
Slums: **522.7 million (30%)**

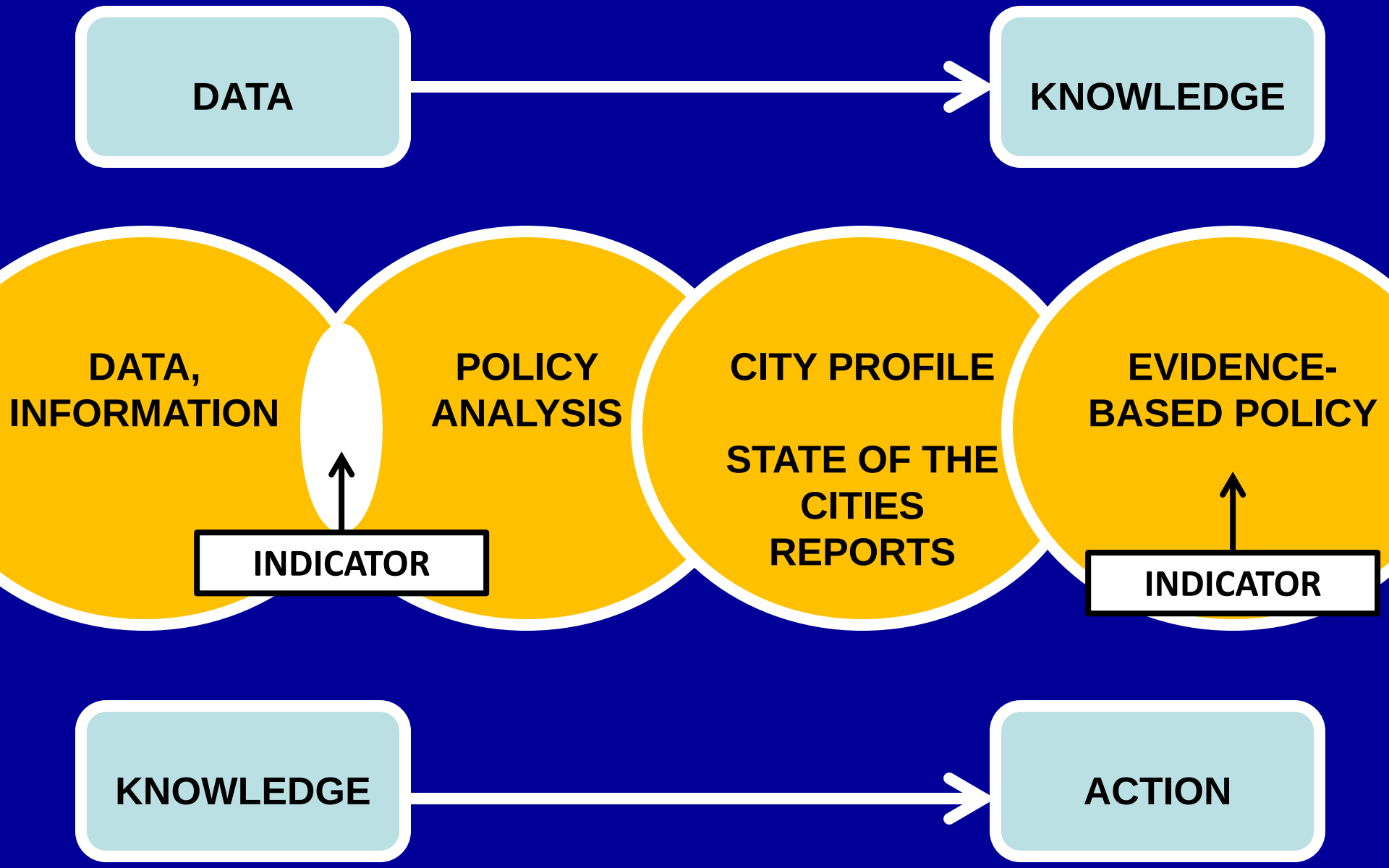
1 out of 2 people in the world lives in urban areas
1 out of 4 people living in urban areas lives in slums
1 out of 2 people living in urban areas in Africa lives in slums
1 out of 4 people living in urban areas in Latin American lives in slums
1 out of 3 people living in urban areas in Asia lives in slums

Source: UN-Habitat, State of the World Cities Report 2012/2013

Analyses urbanisation trends & conditions[85]






DATA
KNOWLEDGE
DATA, INFORMATION
INDICATOR
POLICY ANALYSIS
CITY PROFILE
STATE OF THE CITIES REPORTS
EVIDENCE-BASED POLICY
INDICATOR
KNOWLEDGE
ACTION

THE END
thank you.

UN HABITAT
FOR A BETTER URBAN FUTURE

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