

# The Role of Disaster Risk Reduction and Resilience Building in promoting Integrated Regional Development: Experiences from Latin America and Africa

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# Outline

1. Background: Links between disaster risk and (urban) poverty
2. Case in South Africa (hints on pro-poor policy and interventions)
3. Case in Brazil (hints on pro-poor policy and interventions)
4. (some) Policy implications/ recommendations
5. (some) Linkages with Integrated Regional Development Planning

# UNCRD's goal and means: Promoting sustainable regional development through

Enhancing capacity of governments and community groups in developing countries, with a focus on:

1. Economic and social development,
2. Environmental management, and
3. Disaster management planning

# Disaster Management Planning at UNCRD 1985-2011, and 2012...

## HISTORY OF DISASTER MANAGEMENT PLANNING UNIT

**1985:** Launched Disaster Management Planning Unit in the UNCRD HQ, (Nagoya).

**1999:** Established in Kobe as the Disaster Management Planning Hyogo Office supported by the Hyogo Prefectural Government (post 1995 Kōbe earthquake)

Theme	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CBDM Community Based Disaster Management	CBDM I: Community Based Projects			CBDM II: Sustainability in CBDM			Urbanisation and CBDM		Gender in CBDM	
			PNY: Patanka New Life Plan		ATLI: Afghanistan Training and Livelihood Initiative					
		GESI: Global Earthquake Safety Initiative					HESI: Housing Earthquake Safety Initiative			
			Kathmandu Exchange Program (advisory service)			Hyogo-Gujarat Freindship Fund (advisory service)		SESI: Reducing Vulnerability of School Children to Earthquakes		
Earthquake Reconstruction										
Earthquake Safety Initiative										
SESI School Earthquake Safety Initiatives										
						Hyogo-Kerman Friendship Fund (advisory service)				

**2011 June:** Relocation of the office to the UNCRD HQ (Nagoya)

**2012 June:** New team, new Coordinator, 'new' orientation...

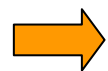
### New DMP Programme:

**Disaster Risk Reduction & Resilience Building of Urban Poor Communities  
(including Poverty Reduction, Housing & Slum Upgrading and Prevention)**

# Sustainable regional development through activities such as

- **Training:** Organize and conduct training courses targeting government officials engaged in regional development in developing countries
- **Research:** Conduct research in regional development
- **Advisory Services:** Provide advisory services for governmental organizations, NGOs, universities, **communities**, etc.
- **Establishment of Information Network:** Promote the exchange of information in regional development

**Promoting sustainable regional development**



**aiming at achieving the MDGs**

# The Millennium Development Goals (MDGs)

**1**



ERADICATE  
EXTREME POVERTY  
AND HUNGER

**2**



ACHIEVE UNIVERSAL  
PRIMARY EDUCATION

**3**



PROMOTE GENDER  
EQUALITY AND  
EMPOWER WOMEN

**4**




REDUCE  
CHILD MORTALITY

**5**



IMPROVE MATERNAL  
HEALTH

**6**



COMBAT HIV/AIDS,  
MALARIA AND OTHER  
DISEASES

**7**



ENSURE  
ENVIRONMENTAL  
SUSTAINABILITY

**8**



GLOBAL  
PARTNERSHIP FOR  
DEVELOPMENT

# The MDGs and their Targets



## **GOAL 1:**

### **ERADICATE EXTREME POVERTY & HUNGER**

#### **Target 1.A:**

**Halve, between 1990 and 2015, the proportion of people whose income is less than \$1.25 a day**

#### **Target 1.B:**

**Achieve full and productive employment and decent work for all, including women and young people**

#### **Target 1.C:**

**Halve, between 1990 and 2015, the proportion of people who suffer from hunger**

# The MDGs and their Targets



## **GOAL 3:**

## **PROMOTE GENDER EQUALITY AND EMPOWER WOMEN**

### **Target 3.A:**

**Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015**



# The MDGs and their Targets



## **GOAL 7:**

### **ENSURE ENVIRONMENTAL SUSTAINABILITY**

#### **Target 7.A:**

**Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources**

#### **Target 7.B:**

**Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss**

#### **Target 7.C (formally Target 10):**

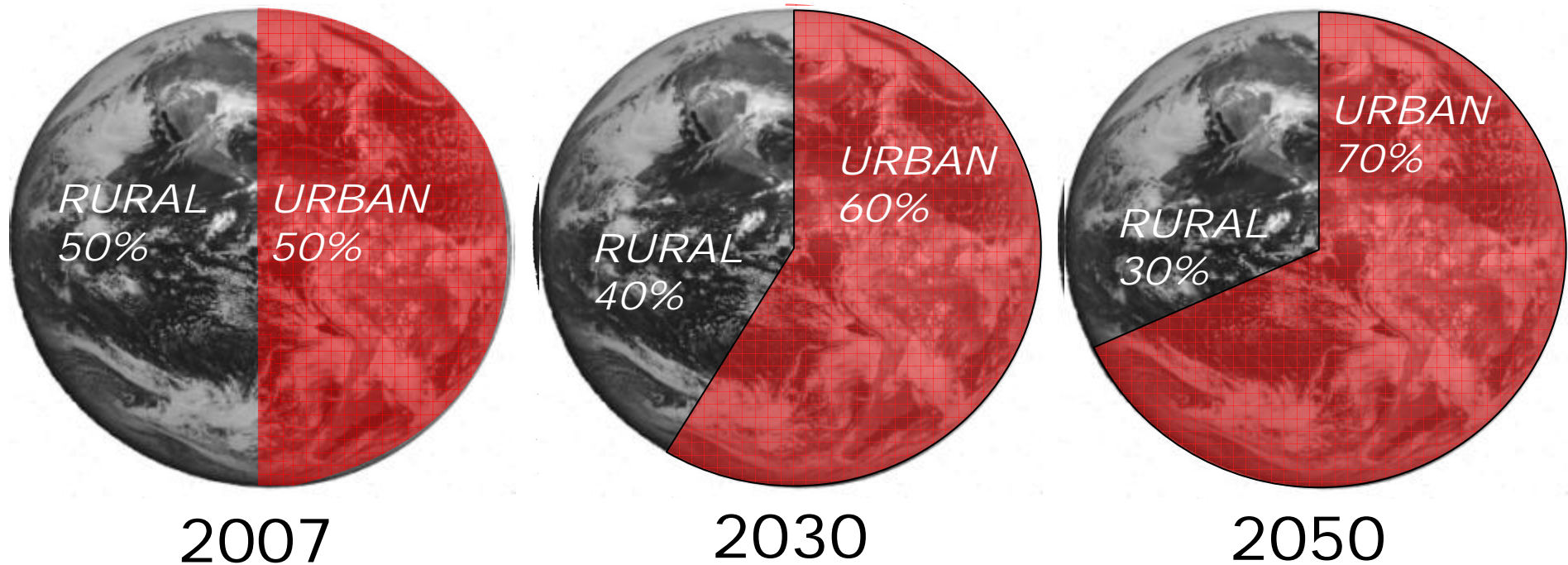
**Halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation**

#### **Target 7.D (formally Target 11):**

**By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers**

# Urbanization Trend

GLOBAL POPULATION: **RURAL** / **URBAN**

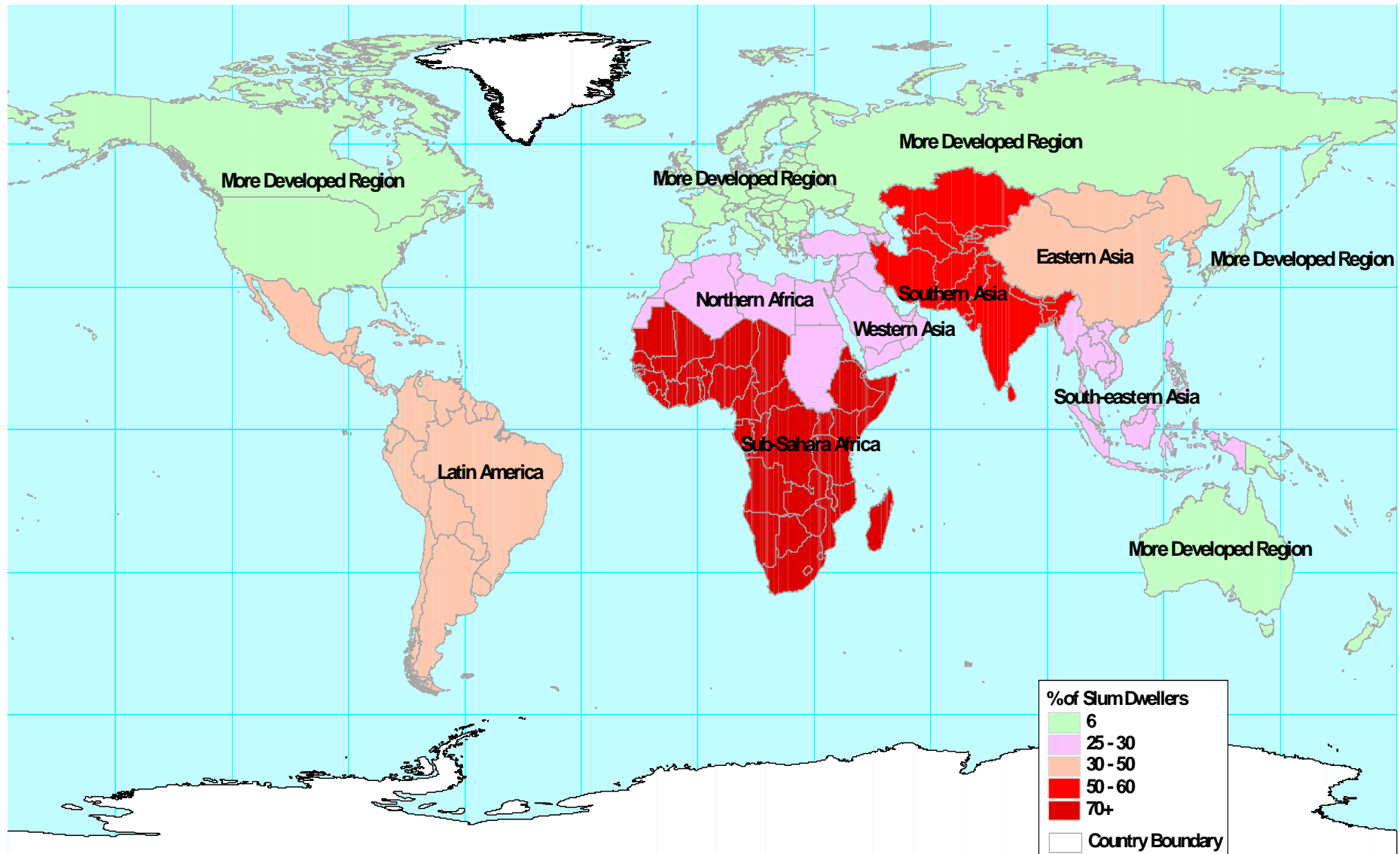


Since **2007**, when urban citizens reached 1/2 of the World's population, we entered in the Urban Era, with an **unprecedented pace of urbanization** (2050: Urban 70% vs Rural 30%)

# Urbanization...: 1) in developing countries 2) informal (slum formation and expansion)

- **95 % of the urban growth** will occur in **developing countries** (particularly in **Asia** and **Africa**)
- **80 % of this (95 %) rapid urban growth** will be uncontrolled or **informal**, i.e., it will take the shape of **urban slums**
- The **main factors of urban growth** are:
  - **Natural growth of cities**,
  - **Conversion of rural areas into urban areas**; and
  - **Rural migration** (Urban development and rural development are linked)
- The **main factors** contributing to **slum formation** are:
  - **Lack of access to adequate, affordable urban land**
  - **Lack of adequate, affordable and safe housing options**
  - **Lack of urban infrastructure and urban services**
- Which some attribute to:
  - **Weakness of local human and institutional capacities and governance**;
  - **Local governments have limited financial means** (insufficient resources allocations and/or revenue-raising powers transferred from central governments)
    - to fulfil their responsibilities (ensuring basic service delivery, infrastructure development, adequate housing and services to communities, promoting social and economic development, and safe and healthy environment...)

# Proportion of slum dwellers in urban areas by region (2005)



# Urban Growth Rates and Slum Formation & Expansion Rates are almost identical in some regions (2005)

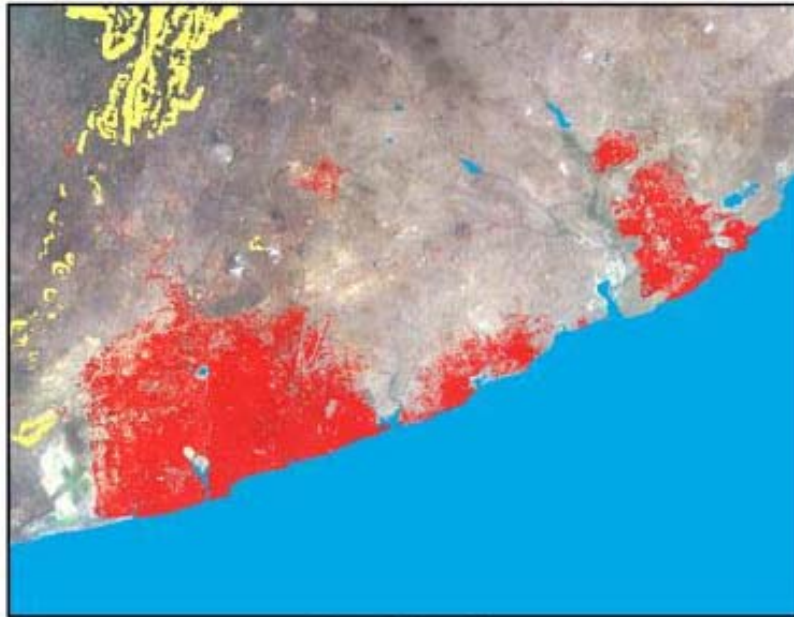
	Urban Growth	Slum Formation & Expansion
Sub-Saharan Africa	4.6	4.5
Southern Asia	2.9	2.2
Western Asia	2.9	2.7

Urban Growth & Slum Formation in Selected Regions in 2005 (Source: UN-HABITAT, 2009)

**In other words, informality is the predominant mode of urbanization in those regions (of developing world)**



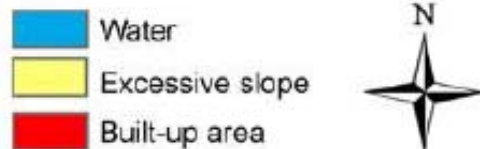
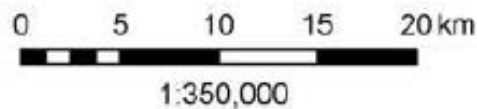
# Expansion of Accra, Ghana: 1985-2000 (15 years)



T<sub>1</sub>: 6-Mar-85



T<sub>2</sub>: 4-Feb-00



Measure	T <sub>1</sub>	T <sub>2</sub>	Annual % Change
Population	1,882,990	2,789,380	2.67%
Built-Up Area (sq km)	133.35	344.26	6.56%
Average Density (persons / sq km)	14,120.39	8,102.64	-3.66%
Built-Up Area per Person (sq m)	70.82	123.42	3.79%
Average Slope of Built-Up Area (%)	3.11	3.11	0.01%
Maximum Slope of Built-Up Area (%)	12.28	12.28	0.00%
The Buildable Perimeter (%)	0.71	0.73	0.15%
The Contiguity Index	0.69	0.80	1.01%
The Compactness Index	0.68	0.61	-0.75%
Per Capita Gross Domestic Product	\$1,325.50	\$1,836.23	2.21%

# Expansion of Accra, Ghana: 1985-2000 (15 years)

**Unavailability of land, absence of formal right of occupation (security of tenure), and poverty are the cause of slum formation /expansion and of the problems that come with slums**

- Water and sanitation (solid and liquid waste)
- Ramshackle (overcrowded and insalubrious) dwellings
- Problems women and youth:
  - HIV-AIDS, street gangs, poor performance at school and high level of dropping out of school
  - Teenage pregnancy
- Lack of access roads and drainage
- Flooding (and other hazards)





# What is a Slum, a Slum Dweller ?

*A slum household is a group of individuals living under the same roof in an urban area who lack one or more of the following five conditions ('shelter deprivations')\*:*

- ✓ Access to improved (safe drinking) water
- ✓ Access to improved sanitation (solid and liquid waste)
- ✓ Sufficient living area (3 people max per room)
- ✓ Durability of housing: structural quality & non-hazardous location
- ✓ Security of occupation (tenure)

\*Agreed upon by UN-HABITAT United Nations Statistical Division, and Cities Alliance during an Expert Group Meeting (EGM) *Defining Slums and Secure Tenure*, held in Nairobi in November 2002

# Slum dweller? - The 5 Slum Indicators or Shelter Deprivations

*A slum household lacking one or more of the following:*

**1. Access to improved (potable) water**

An adequate quantity of water that is affordable and available without excessive physical effort and time

**2. Access to improved sanitation**

Access to an excreta disposal system, either in the form of a private toilet or a public toilet shared with a reasonable number of people

**3. Durability of housing**

Permanent and adequate structure in a non-hazardous location, protecting its inhabitants from the extremes of climatic conditions such as rain, heat, cold or humidity

**4. Sufficient living area**

Not more than 3 people sharing the same room

**5. Security of tenure**

Evidence or documentation that can be used as proof of secure tenure status or for protection from forced evictions

The poor in urban areas are often very vulnerable, facing major health and environmental problems...



Salvador de Bahia, Brazil

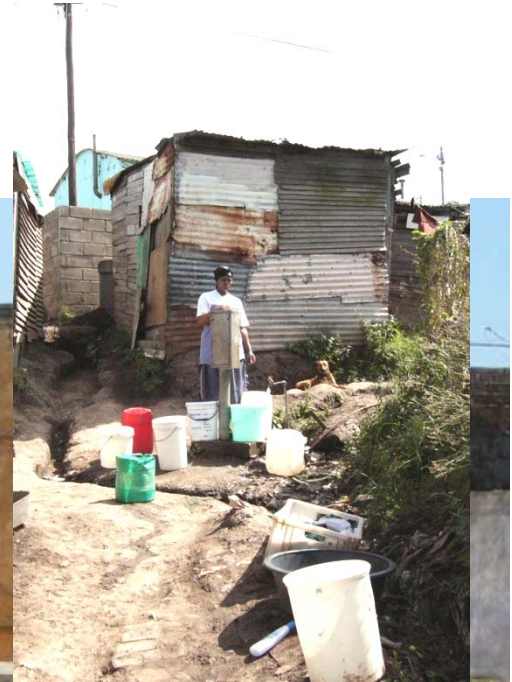
# Water and Sanitation: 90% of health problems are related to the lack of proper water and sanitation

Water sources are often contaminated by:

- Domestic, and untreated industrial and medical wastes;
- Leaching wastes (various informal dumping sites);
- Inadequate treatment of sewage effluent, runoff and drainage...
- Inadequate solid waste management.



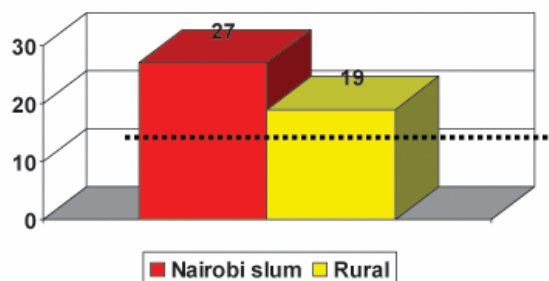
# Access to safe drinking water



**Poor households** spend between **5 to 10%** of their **income** to buy water

- **Istanbul** (Turkey): water from private vendors is **10 times more expensive** compared to **water** provided by **public services**
- **Mumbai** (India): **20 times more expensive**

# Access to improved sanitation

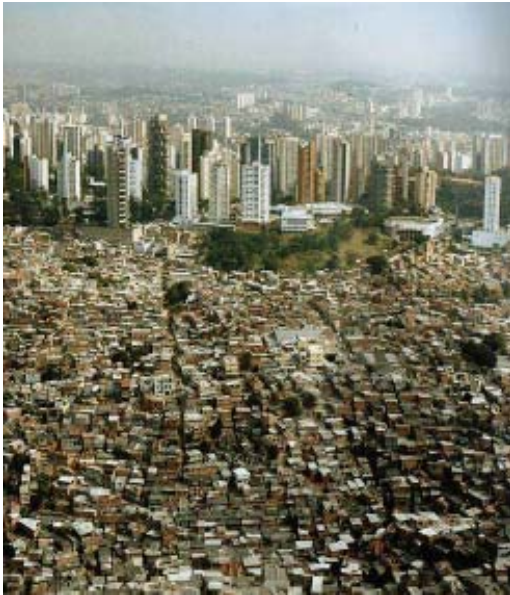


**Child under 5 year mortality rate is 2-3 times higher in informal settlements of Nairobi (capital) than for the whole city... and 50% higher than the poorest rural areas.**

# Access to sanitation (solid waste)



# (in)sufficient living area (overcrowding: > 3 people per room)



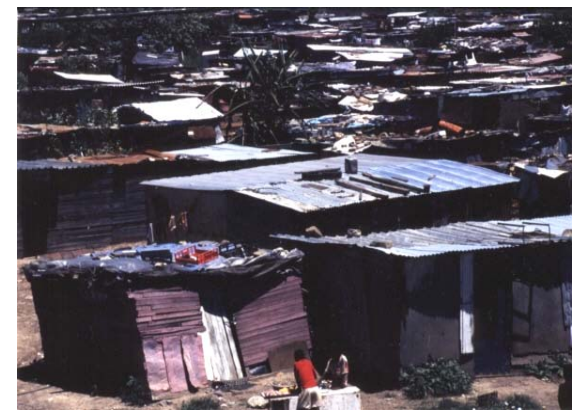


# (non)Durability of housing: Precarious structures

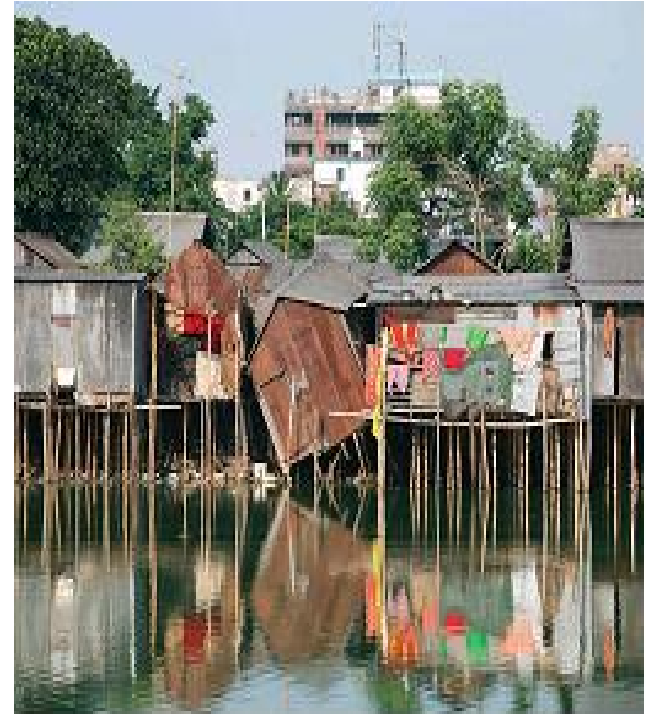
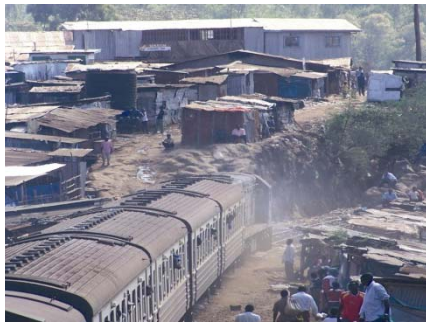
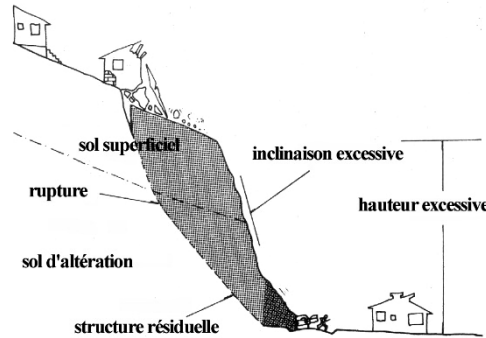
House:

- 'temporary' structure
- not respecting the building codes (security)

In sub-Saharan Africa: 60% of the houses are 'temporary'  
(most often due to insecurity of occupation - tenure)



# (non)Durability of housing: hazardous location



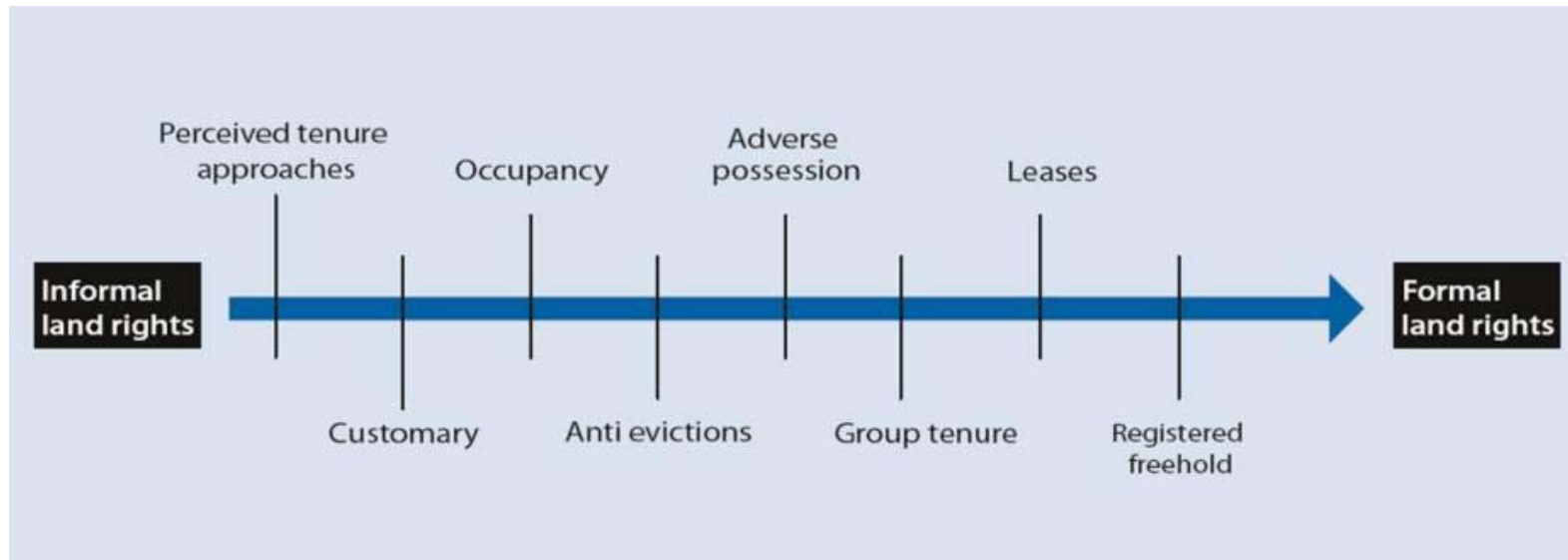
# Security of occupation (tenure)

While the first 4 slum indicators measure physical expression of slum conditions, the 5<sup>th</sup> indicator deals with legality, which is not so easy measure or monitor.

- ✓ Access to improved (safe drinking) water
- ✓ Access to improved sanitation (solid and liquid waste)
- ✓ Sufficient living area (3 people max per room)
- ✓ Durability of housing: structural quality
- ✓ Security of occupation (tenure)

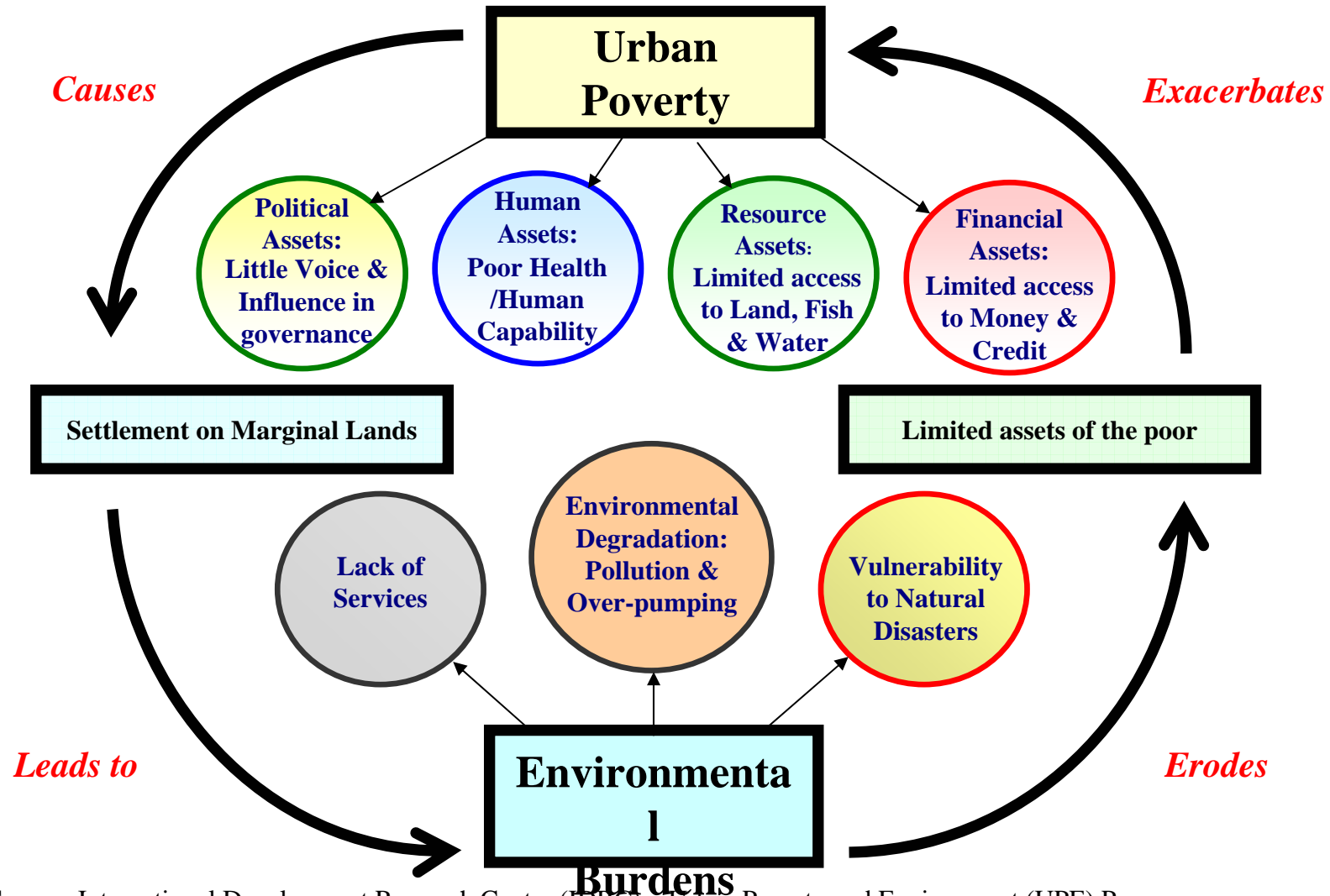
The **Security of occupation (tenure)** indicator has special relevance for measuring denial and violation of housing rights as well as the progressive fulfilment of those rights.

# Security of occupation (tenure): Continuum (or a range) of land rights...



...existing **between formal** (individual, full) **land rights** (on the right end) enshrined in law (protected and transferable) and **informal land rights** (left side), where a group or individuals may have traditional rights to use a piece of land, **without** having **any boundaries** clearly **marked** on the **ground** or on the **map**, or **official paper** certifying who owns or who has what right to the land...)

# Poverty increases exposure and vulnerability to environmental risks and natural hazards and disasters...



Source: International Development Research Centre (IDRC) – Urban Poverty and Environment (UPE) Programme

# ...Environmental risks, natural hazards and disasters exacerbate poverty

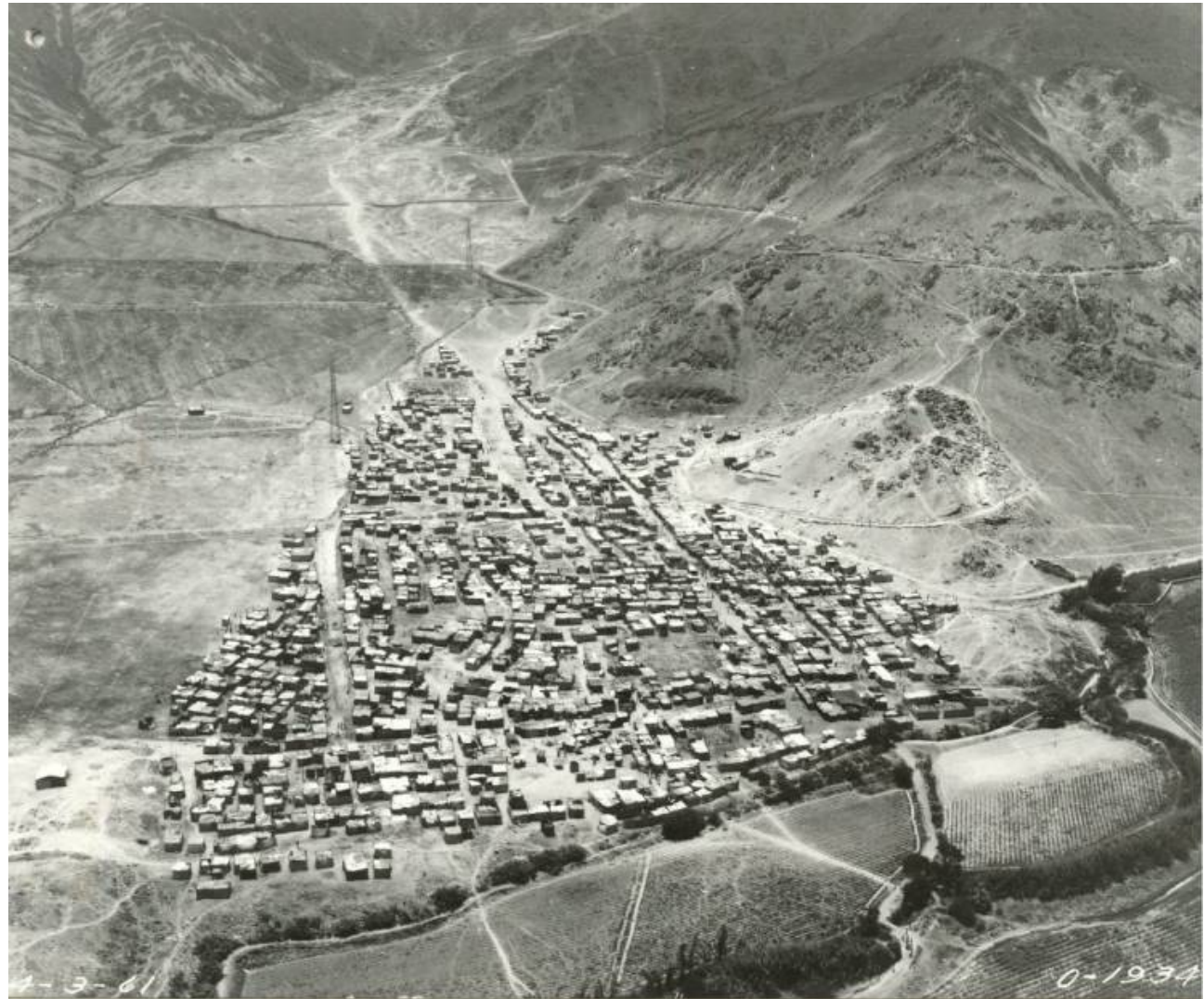
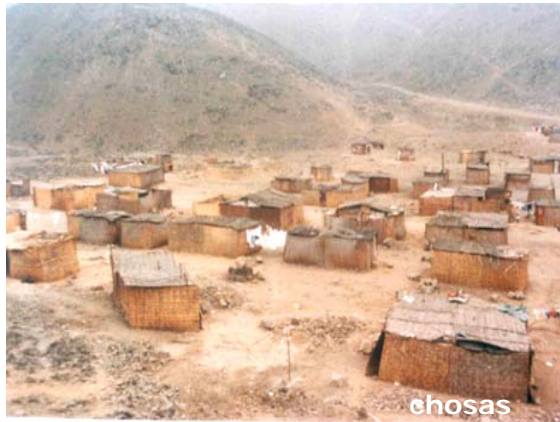
Disasters (even small-scale ones) perpetuates the cycle of poverty

- Increase vulnerability
  - Destroy assets and means of livelihoods (including house and/or plot)
  - Reduce coping capacity (and options) for next disaster
  - The reduced financial means may lead to bad or hazardous choices such as:
    - Reducing food intake quantity and quality;
    - Cut down education expenses; and even
    - Rebuilding on other disaster-prone sites...
- and those will be worsening the urban poor's vulnerability on the long run



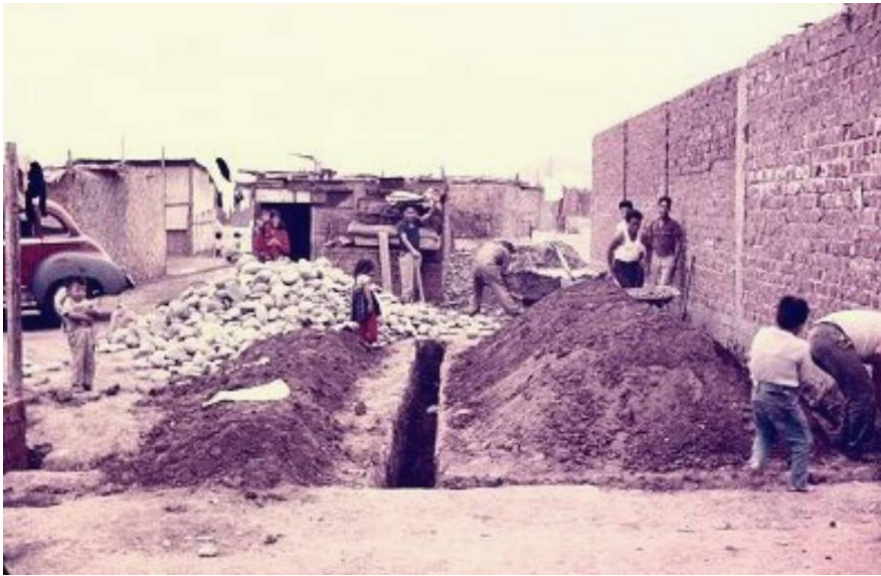
# Invasions, Lima (Peru)

“Housing as a verb” (John Turner)



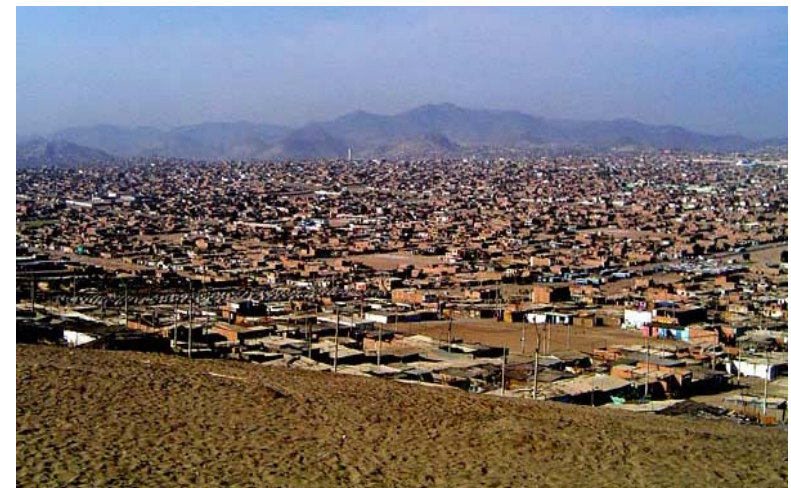
The invasion of Pampa de Cuava, March 1961

# Invasions, Lima (Peru) ...with security of tenure





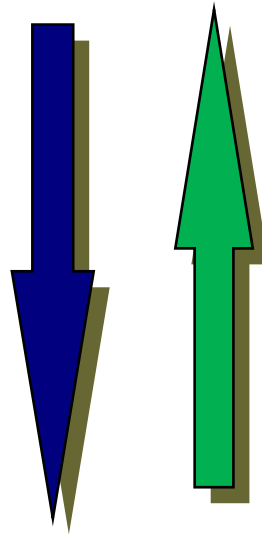
# Invasions, Lima (Peru) with security of tenure... & regularization



# Not so different (just reverse) Housing Development Processes

## **FORMAL URBANIZATION**

1. CADASTRE – legal ID
2. LAND ALLOCATION
3. PLANNING
4. IMPLEMENTATION OF SERVICES AND INFRASTRUCTURE
5. CONSTRUCTION
6. OCCUPATION



## **INFORMAL URBANIZATION**

1. OCCUPATION
2. CONSTRUCTION / consolidation
3. IMPLEMENTATION OF SERVICES AND BASIC INFRASTRUCTURE
4. PLANNING
5. REGULARISATION
6. LEGALIZATION

# Informal vs formal housing building sectors: Some facts

- In some cases, **building materials** (foreign for the most part) can account for up to **80%** of the **cost of a** simple standard **house**;
- **Building codes often** encourage the use of foreign building materials and technologies (and **push households using local & traditional materials into informality and vulnerability** (no technical support));
- **Low-cost housing**, built by small-scale building contractors, **generates 30% more income** than high-cost housing;
- The **informal construction sector**, being labour-intensive, **creates 20% more jobs** and **builds 6 times more per dollar** than formal construction sector;
- \* The informal construction sector is, however, also prone to labour and occupational health and safety abuse;

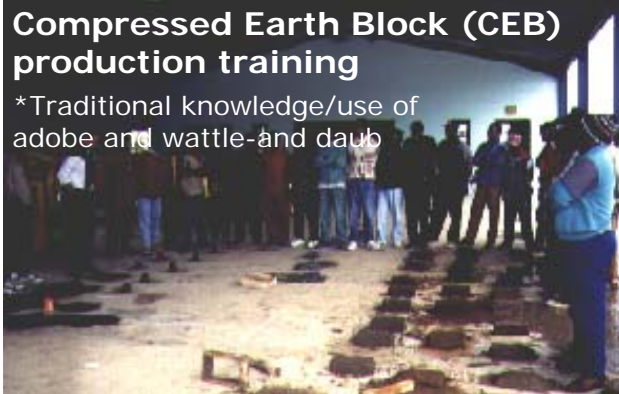
# Informal vs formal housing building sectors: Some policy implications (suggestions)

- Building codes and regulations should be performance-based, rather than prescriptive (and allow specificities of regions within national boundaries);
- Governments should not fight the informal building sector but rather aim to formalize and gradually integrate it (through flexibility, lowering legality requirements...);
- Governments should encourage and provide (technical) support to self-builder/entrepreneur households to build/refurbish stronger (disaster-proof) housing structures
- Governments should promote research & innovation in building materials & technologies, particularly those linked to local and traditional building cultures
- Governments should invest in vocational training, building capacities of the small-scale materials and construction sectors, creating skills and income-generation opportunities (particularly for women and the youth);

# Vocational training (CEB, MC roof tiles & wattle-and-daub) in South African (6) slums

**Compressed Earth Block (CEB) production training**

\*Traditional knowledge/use of adobe and wattle-and daub



**CEB masonry training**



**Culturally-adapted integration of women**



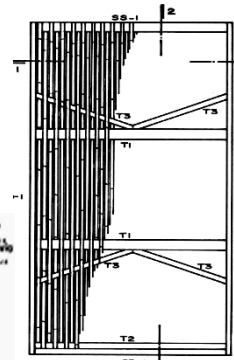
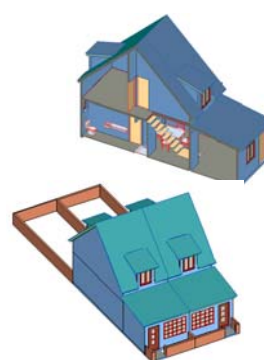
**Final Product: Trained Workers + Community Hall**



**Micro-concrete roof tiles production training (women)**



**Conventional concrete blocks:**  
30% labour + 70% 'raw' materials  
**Compressed Earth Blocks:**  
70% labour + 30% raw materials



Prefabricated **wattle-and-daub** panels training (women)

# Vocational training in (6) slums in RSA Compressed Earth Block Masonry (bricklaying)



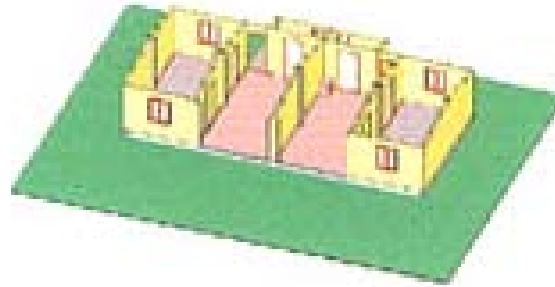
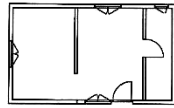
# Vocational training: Micro-Concrete roof tiles (Women)



**Making micro-concrete roof (MCR) tiles as an alternative to asbestos and metal sheets normally used in RSA**

# Vocational training (CEB, MC roof tiles & wattle-and-daub), East London, South Africa

From a stand alone RDP 'Starter House' to semi-detached (higher density), more respectful of the cultural aspects of the community



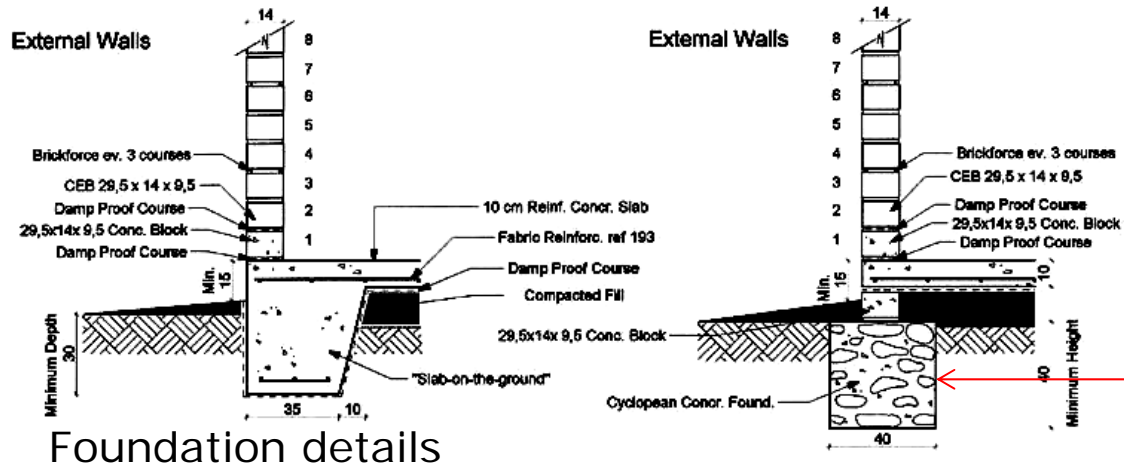
- 30 highly-skilled ("Face Brick" quality) masons small-scale contractors
- 30 CEB makers (micro-enterprises)
- 20 women trained on roof tiles production, prefabricated wattle-and-daub panel-making and other building components (e.g. micro concrete floor tiles)
- 150 (bigger) houses built (18 months later)



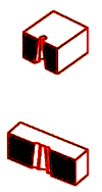
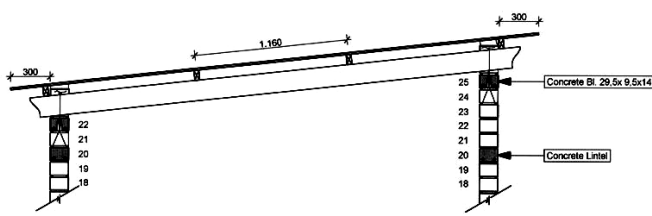


# Vocational training East London, RSA

## Developing low-cost, labour-intensive, environmental-friendly, building details



Use of waste (pebbles) from Compressed earth block manufacturing process



Development of a *roof block* allowing to anchor the roof; and to ease the roof load distribution in the compressed earth blocks wall.



Roof anchoring detail

# Building Codes & Regulations

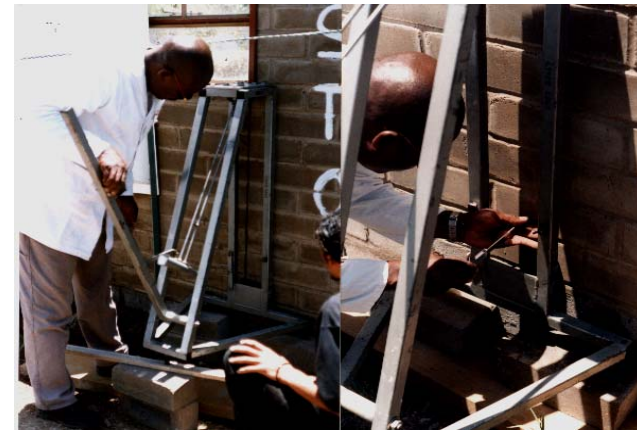
Performance-based material normalisation

CEB tested by South African Bureau of Standard

CEB approved at Provincial & National levels



24-hour rain penetration test



Sharp objects impact test

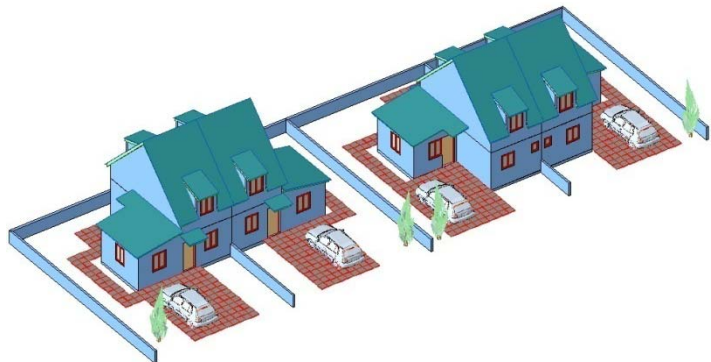
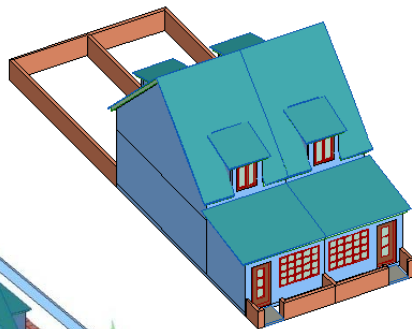


Heavy load impact test



Light and heavy load carrying capacity

# Bridging the Social and Racial divide (multi-racial and socially) integrated neighbourhood w. low/mid/mid-high income Rental & Ownership Semi- detached & Row Housing Bring some (culturally acceptable) level of density



# A drop in the Ocean?

## Post apartheid South Africa (1994)



The reconfiguration of the Republic after the creation of 9 regions or Provinces :

- |                     |                                  |
|---------------------|----------------------------------|
| 1 Eastern Cape      | 6 KwaZulu Natal                  |
| 2 Western Cape      | 7 Eastern Transval or Mpumalanga |
| 3 Northern Cape     | 8 Northern Transval              |
| 4 Orange Free State | 9 North -West Province           |
| 5 Gauteng           |                                  |

- **Area:** 1,227,000 km<sup>2</sup>
- **Population:** 42.5 million  
(Black: 75%; Coloured: 9%; Indian: 3%)
- **Demography:** 2,26%
- **Capital:** Pretoria
- **Urban population:** 66%
- **Languages:** 11 officials
- **Status:** Republic (1960)  
divided in 9 provinces (1994)
- **Religions:** Christians 77%  
Others 23%

# Housing Situation - South Africa (1994)



Countryside *rondavel*



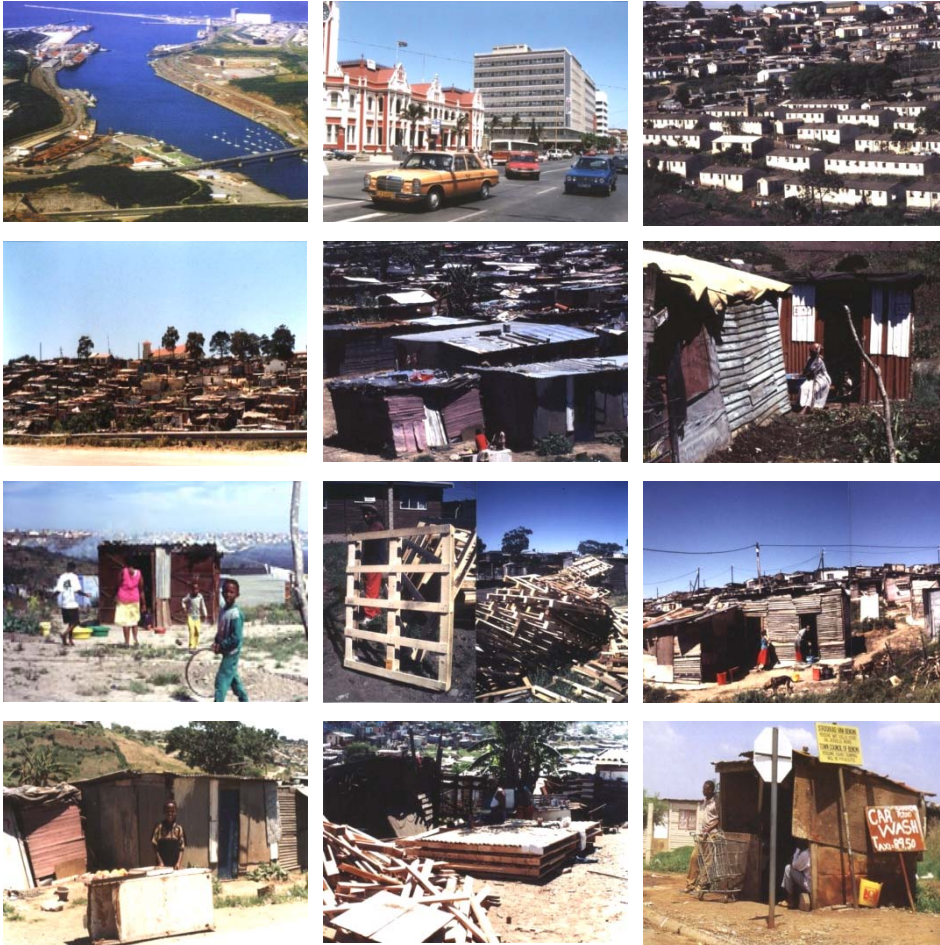
Backyard shacks



Informal townships

- 14,780,000 inhabitants live on the countryside;
- 27,720,000 inhabitants live in cities;
- Housing backlog: 1.5 million (cities);
- Housing demand: 220,000 per year;
- 61% of the urban population living in formal housing (mainly sharing formal housing with other families);
- 5.2% of the urban population live in private sector, gray sector (privately owned houses on public land);
- 13.5% of the urban population live in informal (squatter) housing.

# Overall Situation East London/ Buffalo City



- East London is a Port city with a medium industrial activity (Mercedez Benz);
- 1.4 million inhabitants established on a rugged landscape (rivers and valleys);
- Urban Population Growth: 5% per year (partly due to rural migration);
- 42% of active population is unemployed (30% nationwide);
- 15-20% of the jobs are found in informal sector;
- Housing needs: 100,000 new houses (for about 400,000 people);
- 30% of the E.L. population lives in informal housing;
- **Disasters: fire, flooding, landslides, dwelling collapse**

# Urban Development Framework, South Africa Reconstruction and Development Programme (RDP), 1995...

- Explained and analysed the reality of South African cities;
- Proposed an urban vision;
- Developed strategic goals (based on challenges in the urban sector);
- Set priorities
- Proposed an implementation framework for the operationalization of strategic goals;
- Proposed a programme to monitor and evaluate key elements of the framework.

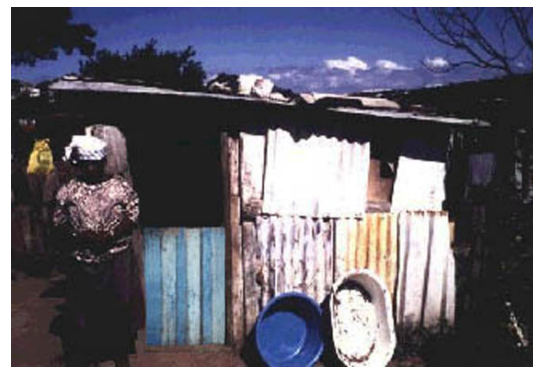
## 4 key elements:

- Integrating the city;
- Improving housing and infrastructure ;
- Promoting urban economic development;
- Creating institutions for delivery

## Success:

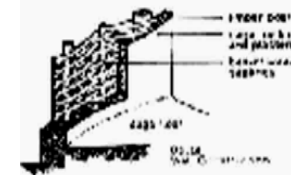
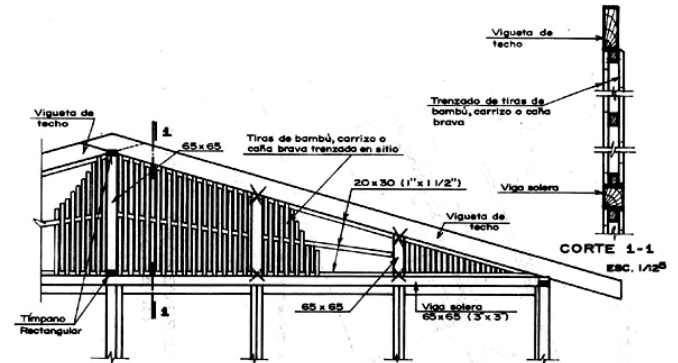
Despite some failures, the **national Framework** was successful in **allowing** for a wide range of (micro to macro) **local and regional initiatives** (providing a direction, guidance and enabling environment)

# Improving the Shack: Working with the poorest (tradition and innovation)



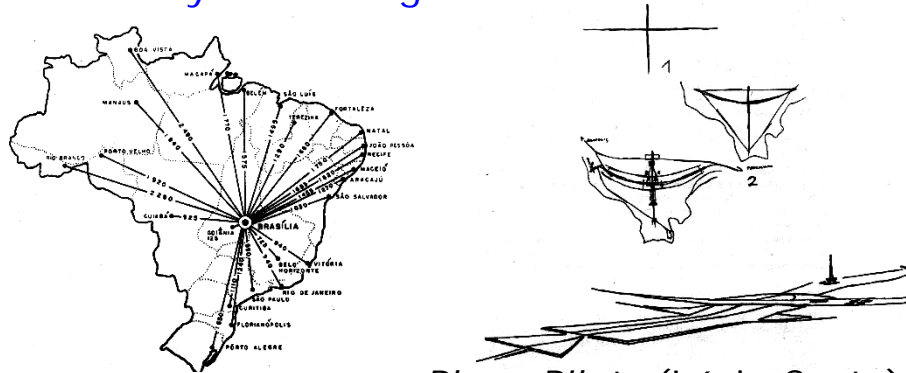


# Improving the Shack: Working with the poorest (prefabrication, quake-proofing & fireproofing...)

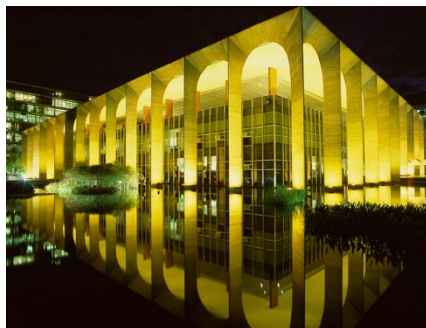


# Integrated Urban Upgrading programme *Santo Antônio do Descoberto* (Goias), Brazil

Brasilia: UNESCO's World Heritage List,  
Masterpiece of the Modernist Architectural Movement,  
built in less than 4 years during the 1960s



*Plano Piloto* (Lúcio Costa)



Courthouse (O. Niemeyer)



Congress (Oscar Niemeyer)



Cathedral (Oscar Niemeyer)

# Integrated Urban Upgrading programme *Santo Antônio do Descoberto (SAD), Brazil...*



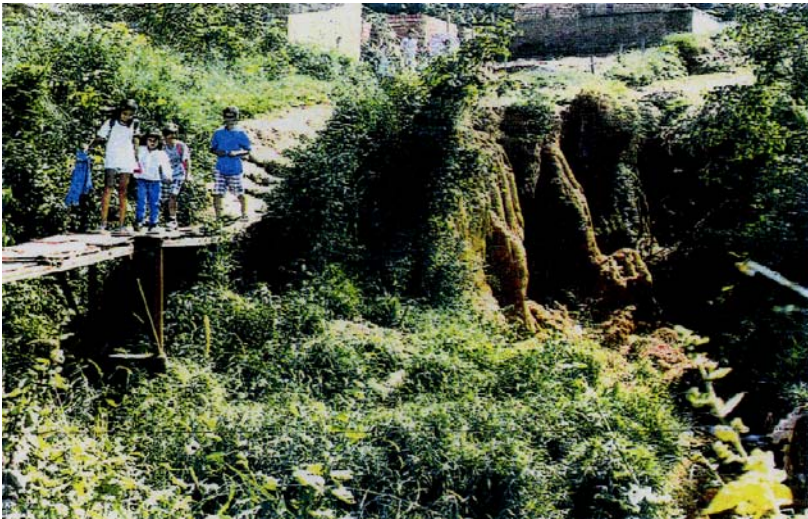
Up to 10 households per plot (360 m<sup>2</sup>)



- 100,000 inhabitants (+2% annual growth);
- 30,000 people commute between SAD and Brasilia everyday (work)
- 30% of the population earns ¥12,000 (150U\$) /month;
- Housing backlog: 5,000 units;
- Housing demand: 2,000 new units per year;
- 35% of the population live in informal —and inadequate— housing structures (*baracas*);
- Plots (360m<sup>2</sup>) occupied by 10 households with 6 or 7 children (each household);
- In many cases, no basic services besides pit latrines, which are contaminating the water wells;
- 65% of population lives in disaster-prone areas (floodplains, marshes, riverbanks or steep hillsides).

# Integrated Urban Upgrading programme *Santo Antônio do Descoberto (SAD), Brazil...*

## Hazards: Erosions (+ landslides)



Ravines created/widened due to soil erosion

The presence, activities, practices and interventions or urban poor on disaster-prone land can sometimes exacerbate the disaster risks by:

- Turning their living area into an impervious surface (increasing surface runoff);
- Disturbing (blocking) the natural surface drainage;
- Deforesting and laying bare (no vegetation cover) river banks, steep hillsides and ravine banks;
- The negative impacts of some (erosion mitigation) interventions (dumping solid waste in ravines)

# Integrated Urban Upgrading programme *Santo Antônio do Descoberto (SAD), Brazil...*

## Hazards: Erosions & landslides

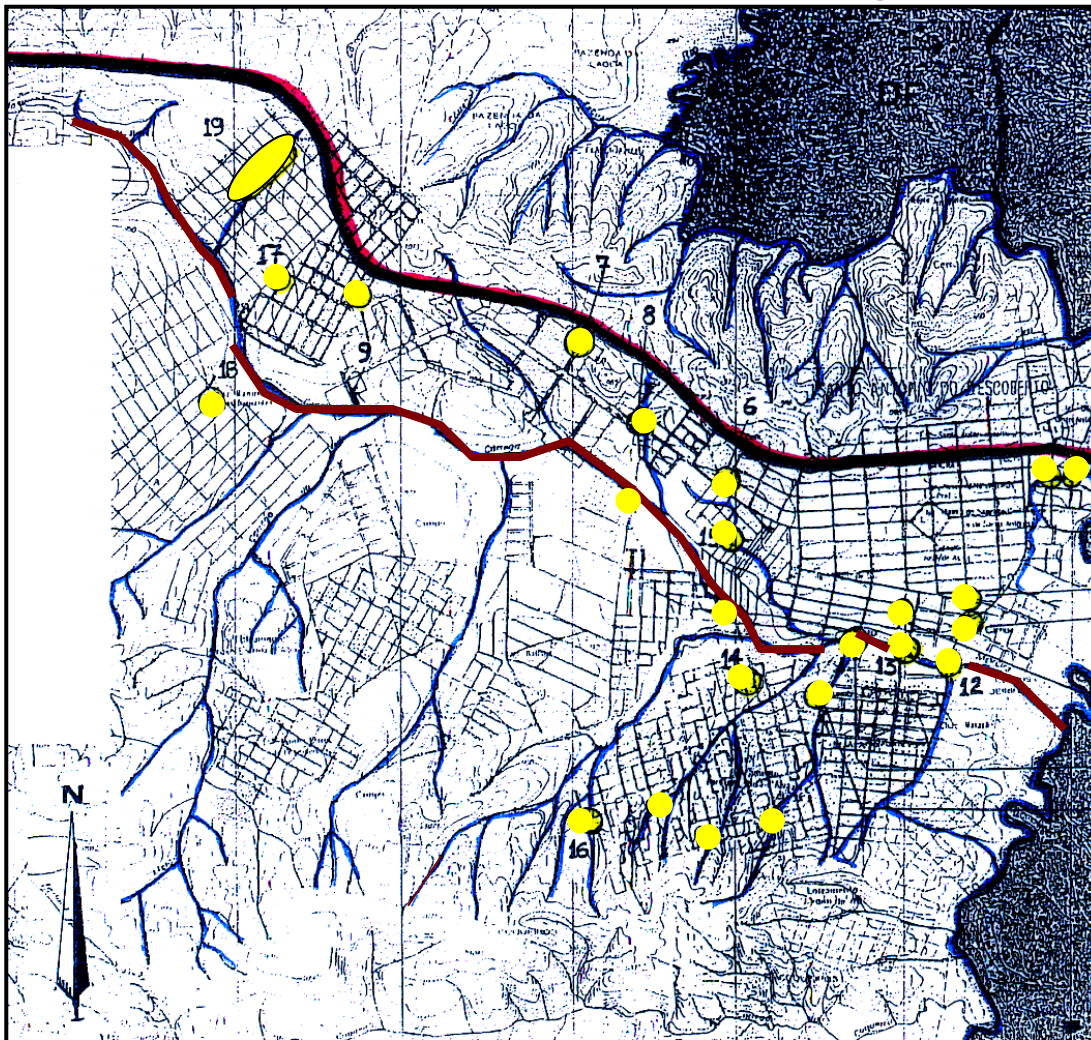


Human activities, practices and interventions may increase the exposure and susceptibility to hazards by changing the nature of the landscape, its vulnerability to erosions and landslides depending on:

- **Soil texture:** % of sand, silt and clay (+ stones, pebbles...); soil **average grain size:** the finer (and lighter): the easier to be moved); **soil structure:** arrangement and organization of the particles (loose soil structure allows water to permeate through the soil)
- **Slope gradient** (combined with **weight** and **altitude**): the greater the slope (even from 10%, up to 70% and more), hence the more risk there is of erosions and landslides
- **Vegetation cover:** deep or shallow-rooted or no vegetation cover (from good to no protection)
- **Moisture level:** Very dry soils have less cohesion while soils saturated with water will also lose their cohesion (and friction) and the more they will be prone to erosion and landslides

# Integrated Urban Upgrading programme *SAD*: Environmental and Disaster Risks Diagnostic

## Environmental and disaster diagnosis

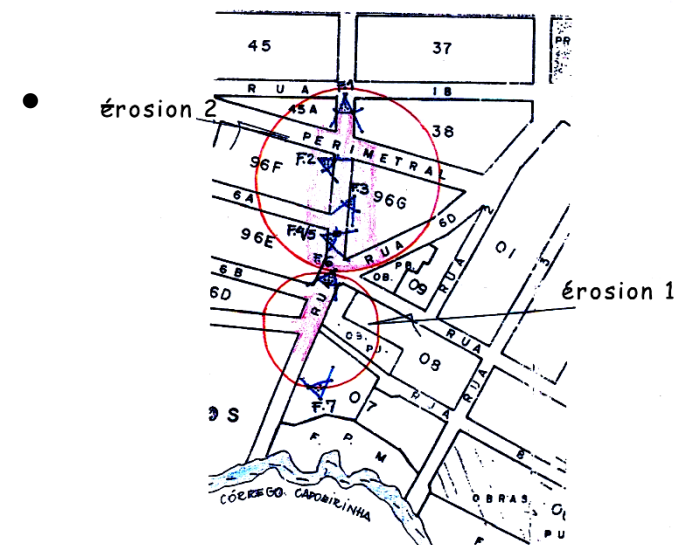


### Local hydrologic system

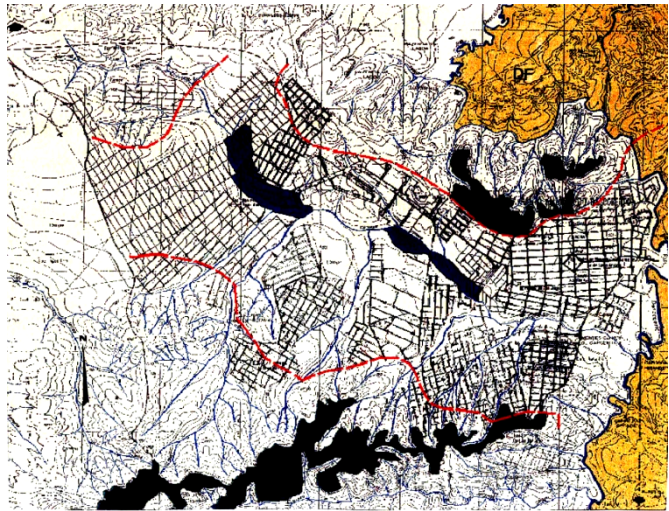
- Flood-prone areas

### River banks, hillsides and ravine banks

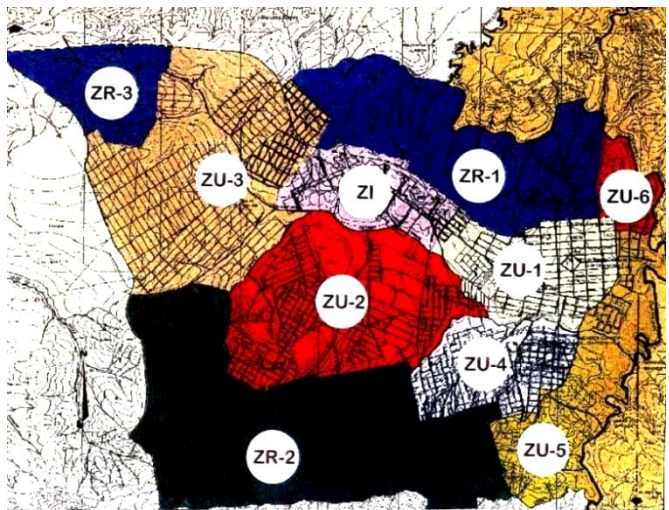
- Erosions
- Landslides



# Integrated Urban Upgrading programme *SAD*: Environmental and Disaster Risks Diagnostic + Master Plan

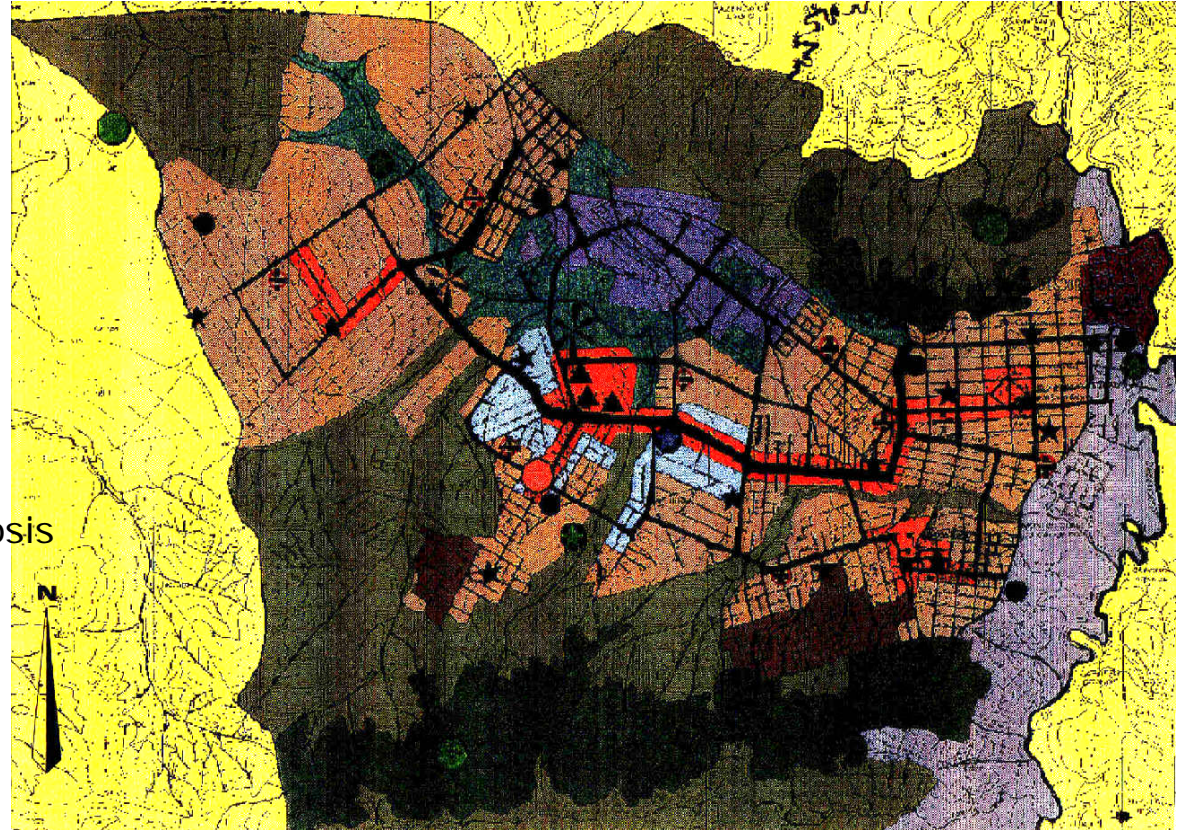


Environmental + disaster risks diagnosis



Zoning Plan

ZU: Urban Zone  
ZI: Industrial Zone  
ZR: Areas of environmental restriction



Master Plan, *Santo Antônio do Descoberto*

- Pilot project (30 municipalities around Brasilia) every city of > 70,000 inhabitants under Brazilian law)
- The Master Plan is looking at the local economic, environmental and social development of the community all together);
- Interdisciplinary and non-technocratic approach;
- Pro-poor & participatory urban planning

# Integrated Urban Upgrading programme *SAD*: Implementation of Master Plan (Urban Facilities...) (New Centre)



Expansion and construction of new educational units



Construction of the Penitentiary



Construction of hostels for teenagers



Some poor neighbourhoods are difficult to access, so solid wastes are collected by donkey-pulled



# Integrated Urban Upgrading programme *SAD*: Implementation of Master Plan (Urban Facilities) (New Centre)



The new municipal road system  
(with storm water drainage and  
wastewater sewer systems)



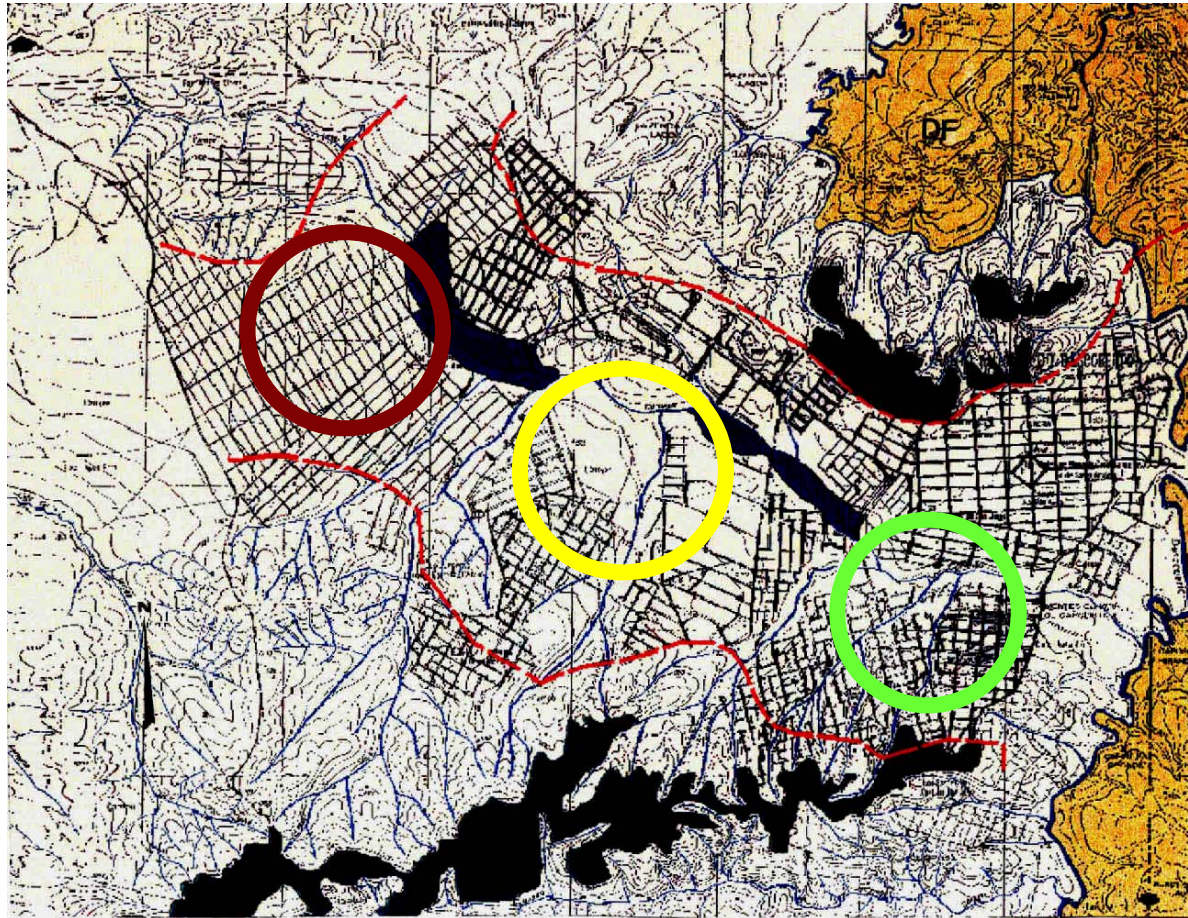
Construction of a new bus station  
in the new (displaced) City Centre)



Construction of the Covered Market in support to small businesses (hawkers)  
Note: Planting trees along the main streets (in collaboration with local schools)

\* Partnership:  
World Bank; Inter-American  
Development Bank; State and  
Federal governments; Private  
Sector; Local associations  
(churches)

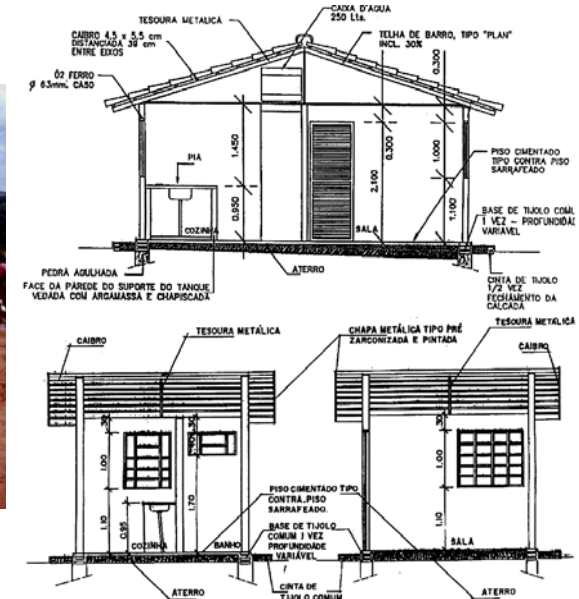
# Integrated Urban Upgrading programme *SAD*: Low-income housing and relocation programme: Core housing + assisted self-help housing



- 1 – Municipality / Cooperative system of Federal government *OCDF (Brasilia)*
- 2 – Municipality / *State Government*
- 3 – Municipality / *Private Association (Sao Paulo)*

# Integrated Urban Upgrading programme *SAD*: Low-income housing and relocation programme: Core housing + assisted self-help housing

## Communal work (*Mutirão*)



## Technical assistance:

1 master mason (technical advisor)  
+ construction of a model house

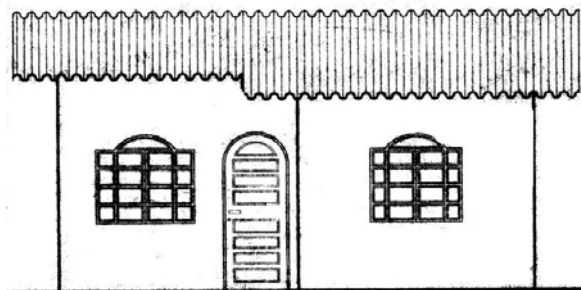


# Integrated Urban Upgrading programme *SAD*: Low-income housing and relocation programme: Core housing + assisted self-help housing

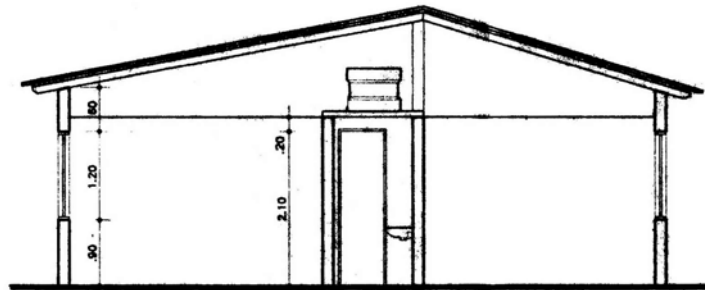
Municipality / Cooperative system of Federal Government *OCDF (Brasilia)*



Houses 26 - 54 m<sup>2</sup>

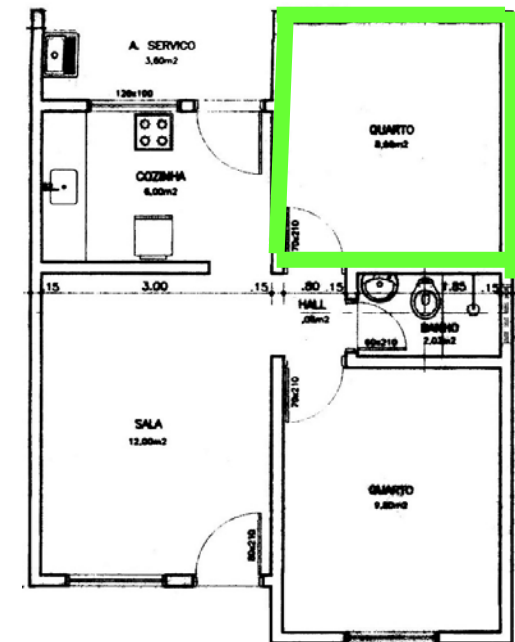


Front elevation



Section

- Households earning three (3) minimum wages (210 US\$)



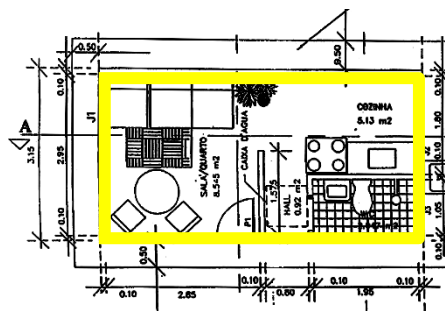
Plan (1-2 or 3 bedrooms)

# Integrated Urban Upgrading programme *SAD*: Low-income housing and relocation programme: Core housing + assisted self-help housing

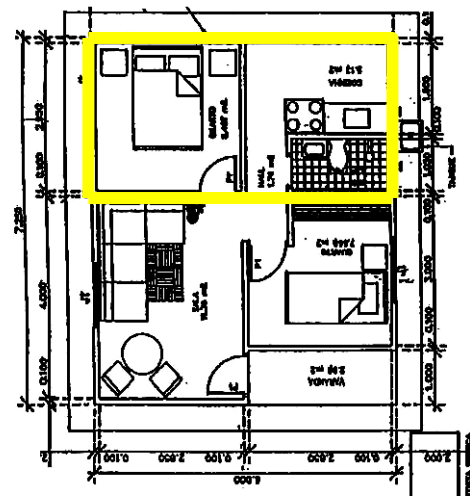
Municipality /State Government

Programme '*Meu Lote, Minha Casa*'

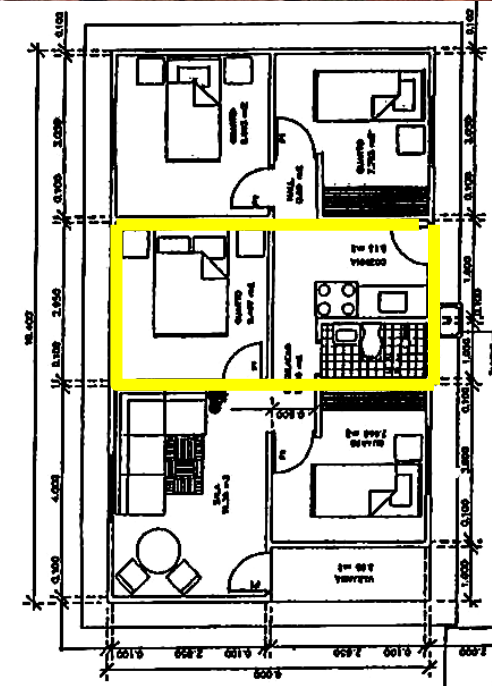
- People on the municipal waiting list; households earning one minimum wage (70 U\$)



Starter house: 19 m<sup>2</sup>



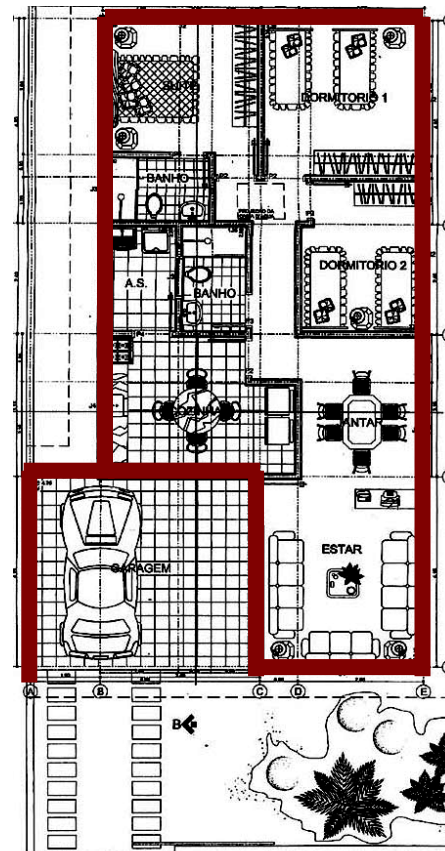
Starter house with front extension: 40 m<sup>2</sup>



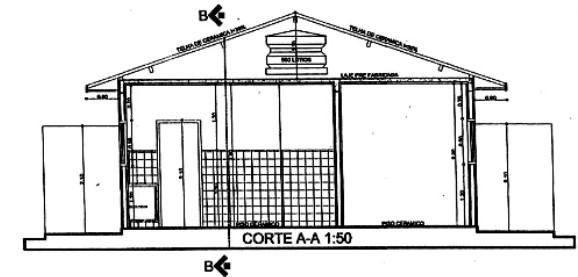
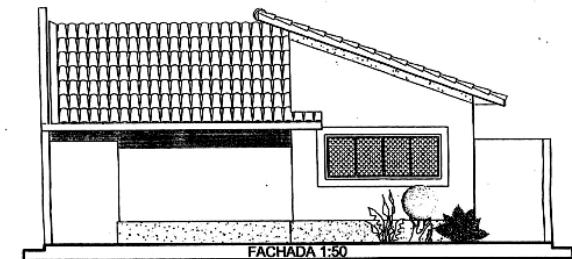
Maximum size 62m<sup>2</sup>  
Extension: front and back

# Integrated Urban Upgrading programme *SAD*: Low-income housing and relocation programme: Core housing + assisted self-help housing

Prefecture / Private Association (*São Paulo*)



- Housing for households earning five (5) times the minimum wage (350 U\$)



Plan 1 – 2 or 3 bedrooms (49 - 110 m<sup>2</sup>)

# Integrated Urban Upgrading programme *SAD*: Vocational training for teenagers from SAD slums (school drop-outs involved in gangs, drug and prostitution)

- Groups of 25 teenagers (students) between 15 to 17 years from very poor families
- Contract: going back to school
- Programme for preparation for future employment
- Training in Cooperatives (building materials production)



Soil identification

- Partnership: Prefecture / Federal Government / Cooperative system of Federal government



Extraction



Stabilization

Production of:

- Concrete pavers (streets & roads)
- Compressed (stabilized) earth bricks

# Integrated Urban Upgrading programme *SAD*: Vocational training for teenagers from SAD slums Cooperative of production of building materials



- Partnership: Prefecture / Federal Government / Cooperative system of Federal government



The first teenagers' cooperative of building material production in Brazil



# Integrated Urban Upgrading programme *SAD*: Vocational training for teenagers from SAD slums Teens' co-op of production of building materials



Graduation day

Teenagers' cooperative of building material production

# Integrated Urban Upgrading programme *SAD*: Compressed earth bricks demonstration building: Restaurant / Coffee shop in (new) Public Market



# Urban poverty, vulnerability and disaster risk reduction, housing, slum upgrading & prevention: Stakeholders and their roles

Governments cannot address those issues alone, but in partnership with a wide range of actors where, besides leading the decision-making and implementation processes, governments act as enablers.

- Central governments: setting national priorities, making policy reforms (institutional, legislative and financial), creating an enabling environment
- Local authorities: coordination and guiding the direction of growth and development of urban areas + Disaster Risks Reduction strategies, measures, plans and programmes and their integration into official urban planning and management systems
- Civil Society: brings knowledge of needs and reality on the ground; participate in disaster risk assessment, in development and implementation of community or local risk reduction strategies; watchdogs monitoring interventions and process (in particular, if they are transparent and in line with MDGs & DGs)
- Private Sector: can contribute with technical and financial resources in (re)building resilient infrastructures
- UNCRD (and international community): can provide support in terms of policy, technical advice and capacity building

# Integrated Regional Development Planning (IRDP) towards increased resilience?

Integrated Regional Development Planning (IRDP) as a instrument to reduce the social, economic and environmental disparities.

IRDP is a set tools that we take and use in different combinations according to the different problems (common to specific groups) to solve or tackle specific problems in a given region. Then, we need to:

- Define the region, group(s) and the need(s) problem(s) or issue(s);
- Diagnosis;
- Identification of potential solutions and constraints;
- Development of strategic goals;
- Establish priorities;
- Identification of potential tools;
- Project, plan or policy formulation;
- Preparation of action plan;
- Development of resource mobilization strategy;
- Project /plan implementation (in phases, with milestones) **with pilots to test hypothesis or a policy;**
- Process of monitoring and evaluation (at different phases or milestones) interim report;
- Adjustments before a new phase of project (after M&E of previous stage);
- Final M&E (with report) and documenting the lessons learned or policy implementation... (and M&E, review and adjust over time...).

# IRDP towards increased resilience...

“IRDP is a selection of a variety of tools” to use together for a specific problem  
Say, for example, Disaster Vulnerability of a Slum Community:

- Participatory and inclusive risk assessment;
- (Participatory...) vulnerability assessment;
- (Participatory...) assessment of coping capacity of the group;
  - A gender-sensitive approach will help identifying the needs, concerns and vulnerabilities of women, girls, boys, men including the most vulnerable sub-groups (child-, youth- and female-headed households, older women and men, the disabled, youth and children) within the group/community.
  - It will also help developing a collective understanding of the diversity of capacities and coping strategies and hence, of the potential contributions of all segments of the community/group in enhancing the community/group's coping capacity and resilience.
- Development of community risk reduction strategies

International community (including UNCRD) will/can provide support for

- Community capacity building – **with concrete interventions (schools, community buildings, houses...) to engage the community in DRR with concrete problems and tangible results.**
- Resource mobilization
- Linkages with the concerned government agencies for their disaster reduction strategies to be integrated (or considered) into local or regional DRR plan and territorial planning and management systems



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# Discussion

- How should risk management be incorporated into IRDP?
- How to increase resilience of urban regions?
- How can IRDP better help mainstreaming DRR and resilience building at regional level?