



# Process of Urbanisation and Health Dynamics

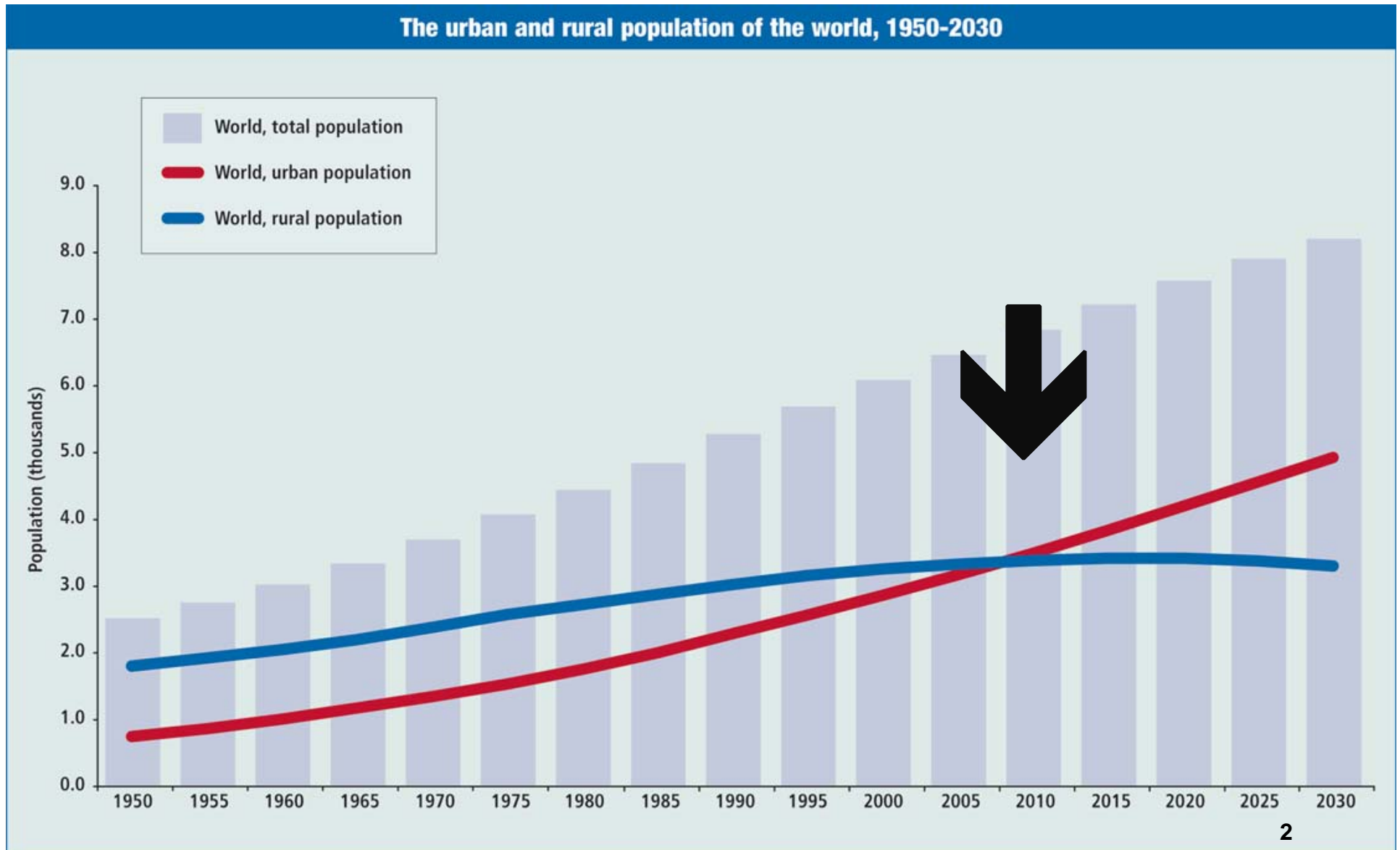
Pr. Gérard J. Salem,

University Paris Ouest- Ceped

**8th Global Conference on Health Promotion  
Helsinki, 2013,**

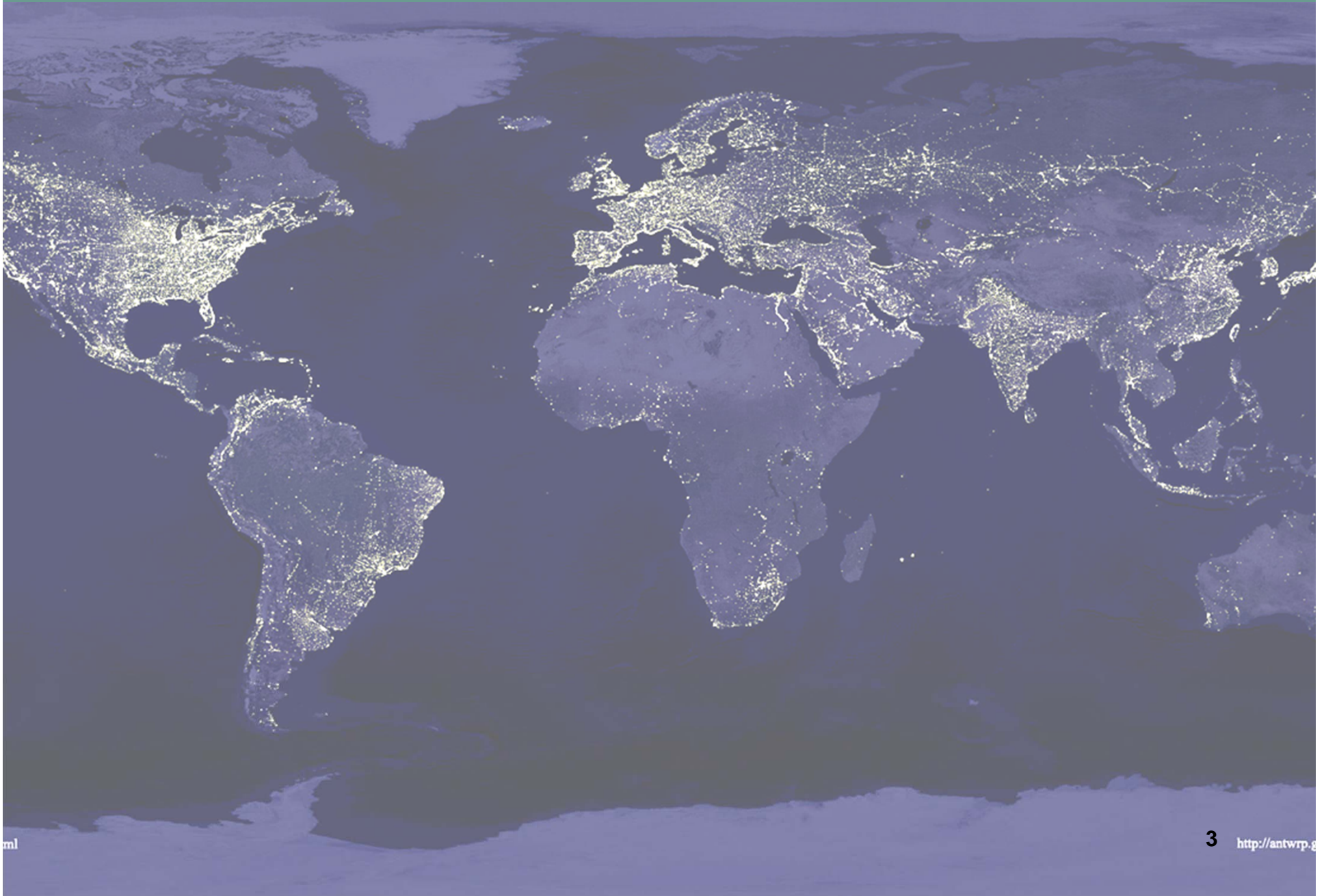
**June 10th- 14th, 2013**


# World Urbanization Prospects : 2007, the URBAN YEAR !





# An urban world



- 
- 1- Urban Health ?
  - 2- Urban process and Health Dynamics

## 1- Impacts of Urbanisation on Infectious Morbidity

- 1) High Human Population Densities :
- 2) Spatial and Social Heterogeneity
- 3) Spaces are open and interconnected

## 11- Impacts of Urbanisation on Chronic and Degenerative Diseases

### Urban diet

- overweight, obesity, and ....stunting
- Diabetes

### Urban pollutions and hazards, water, air, industrial risks, traffic injury, etc

- cancer, disability, etc.

### Urban Stress and Habits

- HBP, Cancers, stress, mental disorders, etc.

## 1 2- Cities as main places of «Health Transitions» ?



- **Demographic transition**
- **Epidemiologic transition**
- **Nutritionnal transition**
- **An history written in advance??**

## 2- Urban process and Health Dynamics

- Is it really an universal phenomena?



An aerial photograph of Venice, Italy, showing the Grand Canal winding through the city. The canal is a dark blue-green color, contrasting with the dense, reddish-brown tiled roofs of the buildings. The city is built on islands in the Venetian Lagoon, with water visible around the edges. In the top left, there is a large, modern structure, possibly a railway station or airport terminal, with a bridge leading to it. The overall view is from a high angle, looking down on the city.

# Venice, Italy

General view of Venice, Veneto, Italy (45°35' N, 12°34' E).  
<http://www.yannarthusbertrand.org>





# Dogon cities, Mali, West Africa

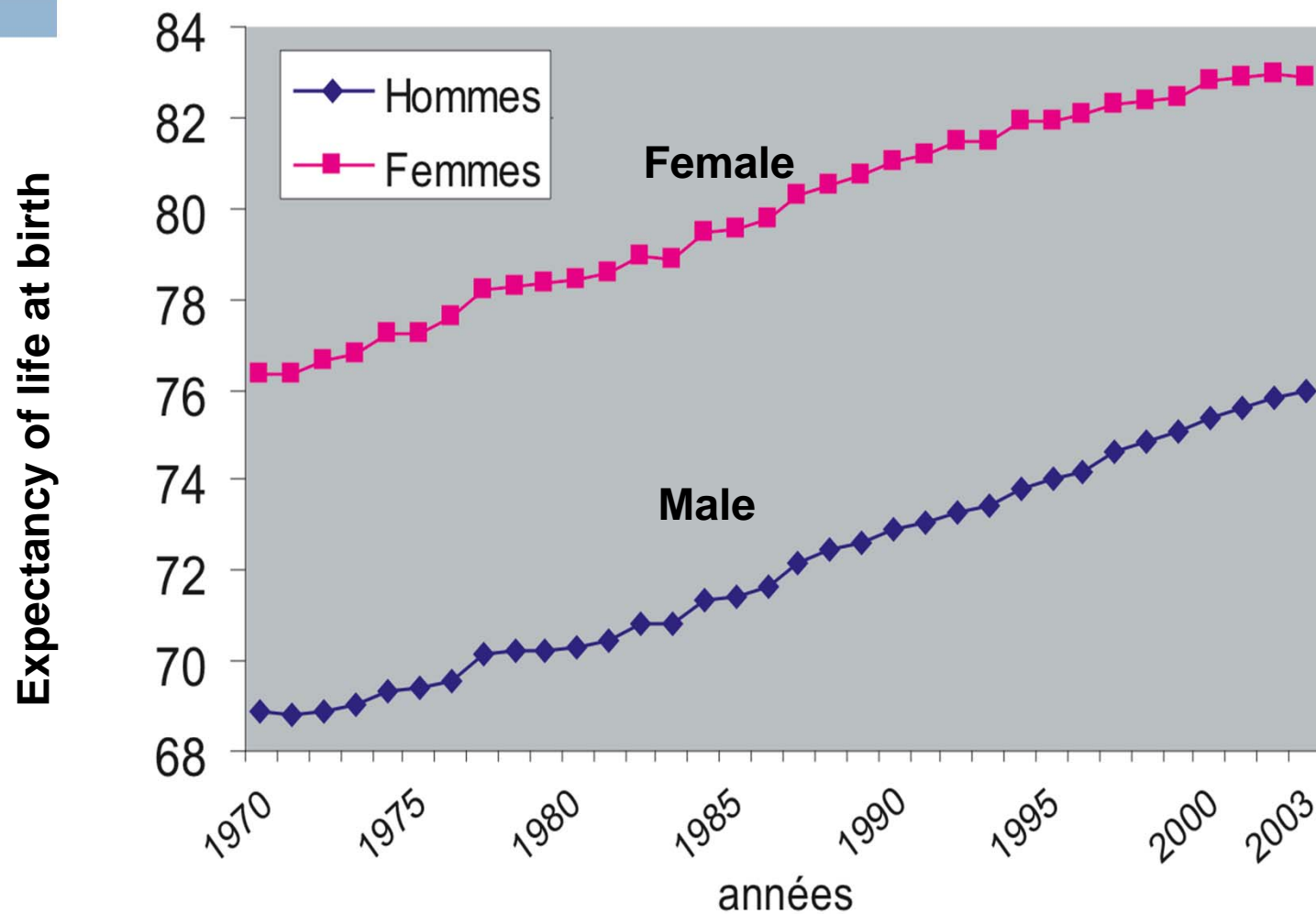
**DOGON VILLAGE NEAR BANDIAGARA, Mali (N 14°23' W 3°39')**  
<http://www.yannarthusbertrand.org>

## 2- Urban process and Health Dynamics

- Is it really an universal phenomena?
- Need comparative approaches between Cities
  - ▣ → ex : France



## Inter-urban comparisons : the exemple of France



Source : CépiDc INSERM / INSEE

Traitement et Infographie : Espace Santé et Territoires, 2008

# France :

## Size of the city and Male Expectancy of Life : 1973-2001

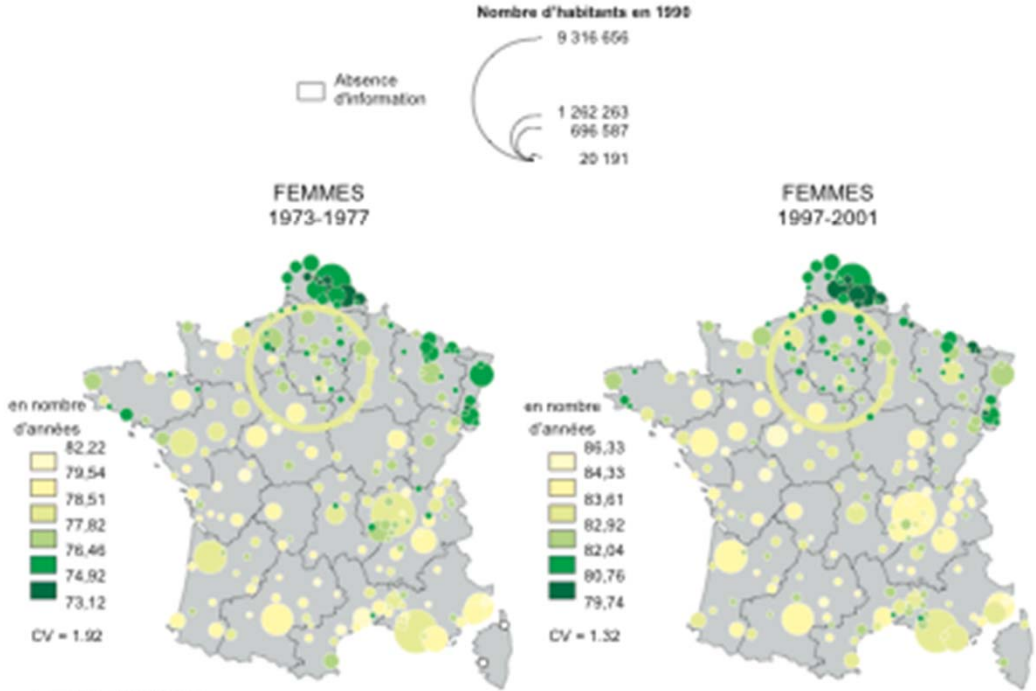
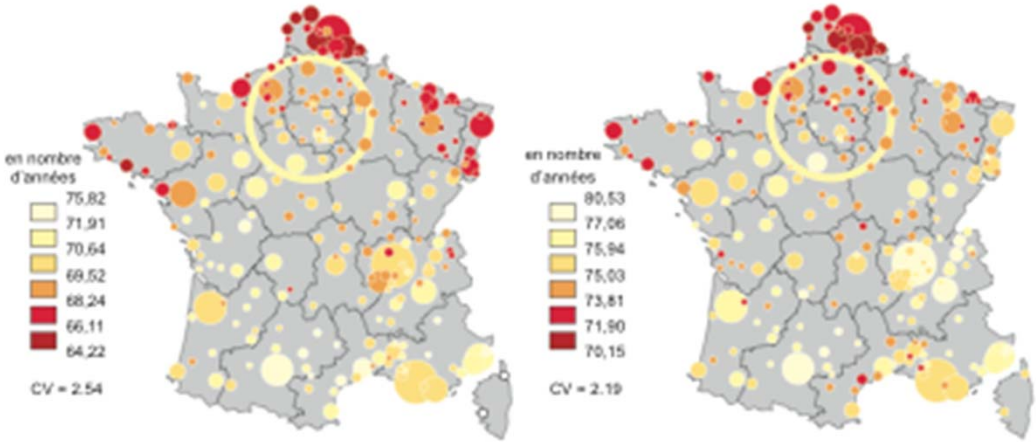
### HOMMES

<b>Catégories UU</b>	<b>1973-1977</b>	<b>1980-1984</b>	<b>1988-1992</b>	<b>1997-2001</b>
Communes rurales	69,57	71,37	73,66	75,55
UU 2 000-5 000 hab	69,24	70,79	72,99	74,79
UU 5 000-10 000 hab	69,03	70,71	72,94	74,86
UU 10 000-20 000 hab	69,18	70,49	72,68	74,72
UU 20 000-50 000 hab	69,39	70,78	73,01	74,80
UU 50 000-100 000 hab	69,53	71,04	73,28	75,02
UU 100 000-200 000 hab	69,01	70,95	72,84	75,41
UU plus de 200 000 hab	69,50	70,87	73,14	75,51
UU Paris	70,84	72,24	73,94	76,98
<b>France entière</b>	<b>69.66</b>	<b>71.20</b>	<b>73.33</b>	<b>75.53</b>

Source : CépiDc INSERM / INSEE

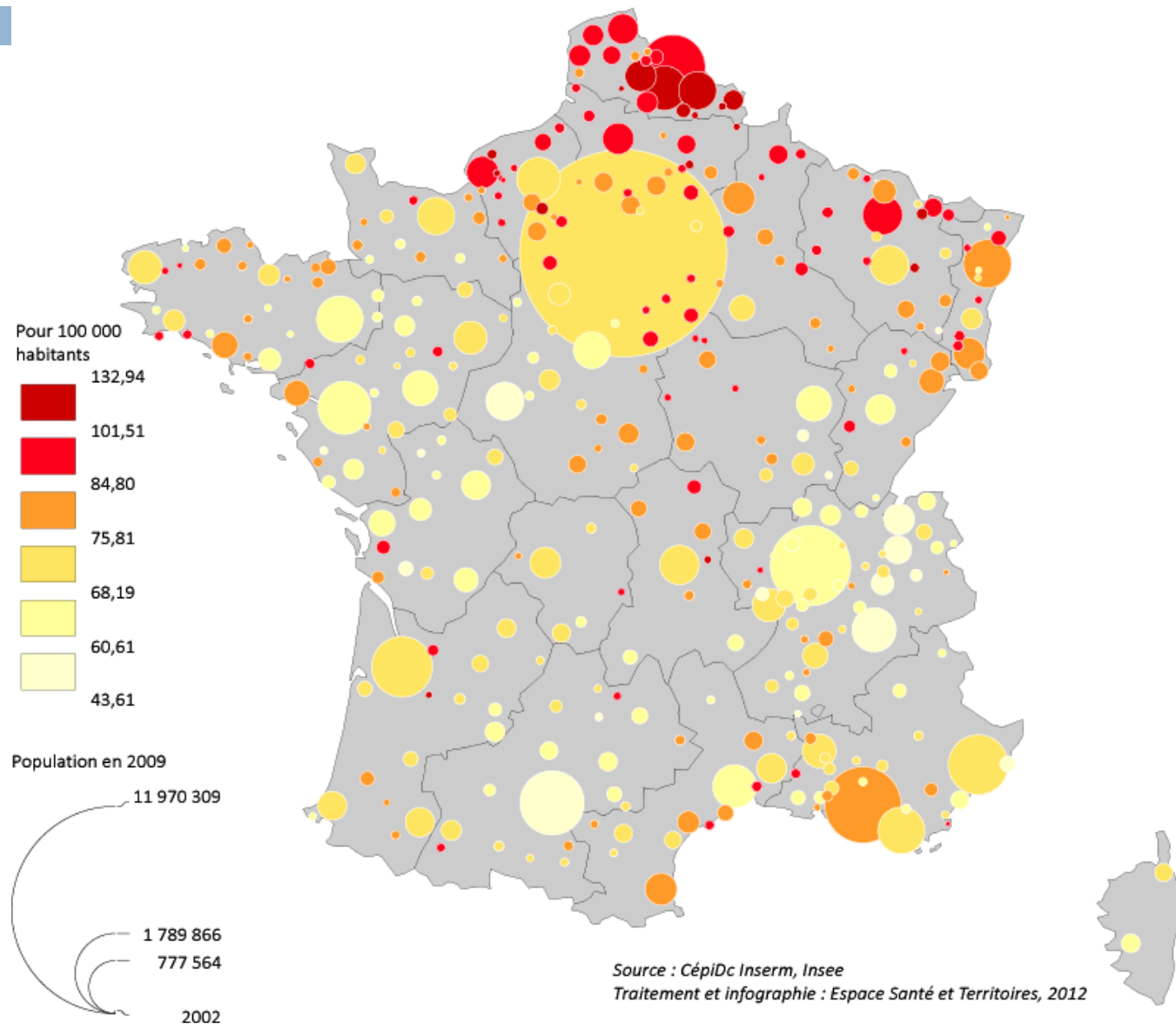
Traitement et Infographie : Espace Santé et Territoires, 2008

# INEQUALITIES OF EXPECTANCY OF LIFE AT BIRTH IN FRENCH CITIES 1973-2001





# Standardized Rates of Avoidable Mortality related to Health Care System (urban areas scale), 2004-2008

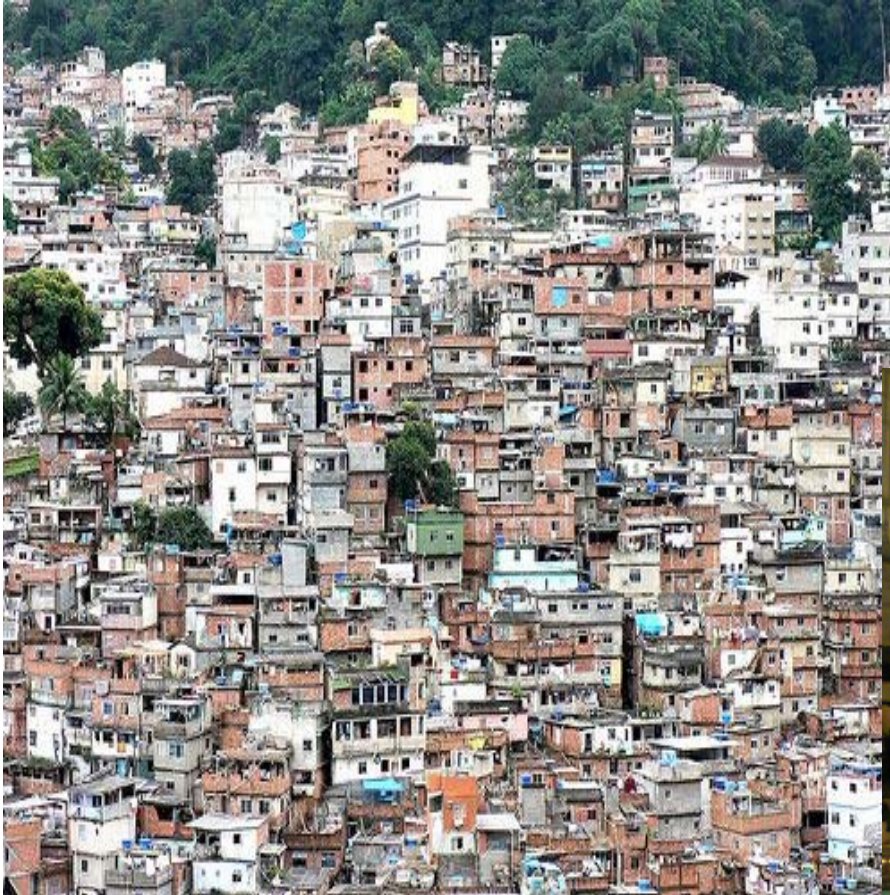


# PARIS : the best and the worst...





# Rio de Janeiro: the best and the worst...



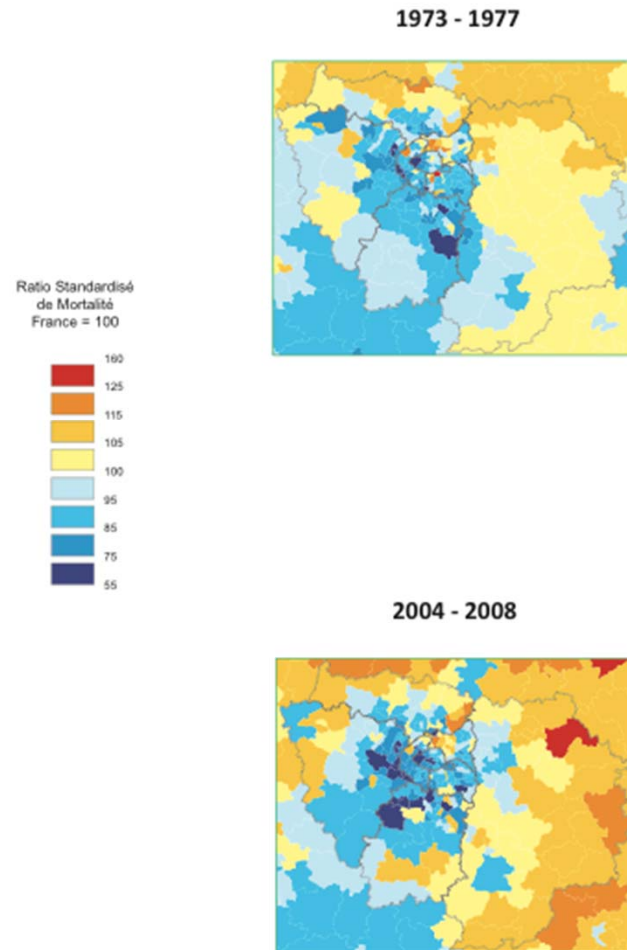
## 2- Urban process and Health Dynamics



- Need intra-urban approaches of Health inequalities
  - Paris agglomeration (France)
  - Ouagadougou (Burkina Faso)
  - San Francisco (USA)

# Standardized Ratio Mortality in Paris Agglomeration 1973- 1977/ 2004-2008

19

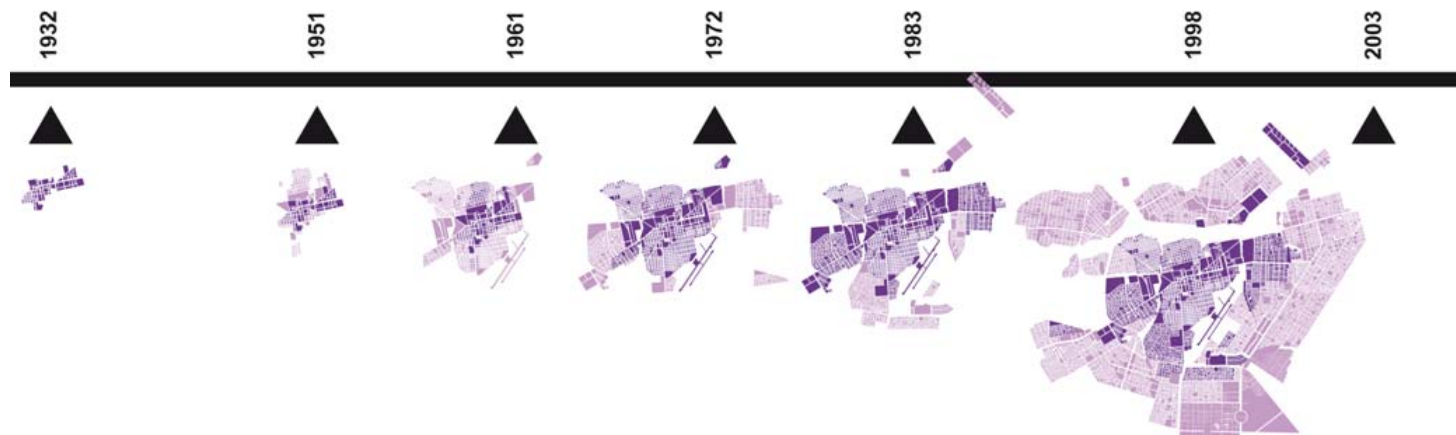


Source : Cépidc INSERM / INSEE  
Traitement et infographie : Cépidc INSERM, Lab. Espace Santé et Territoire, 2012



# Burkina Faso, Ouagadougou Spatio-temporal development

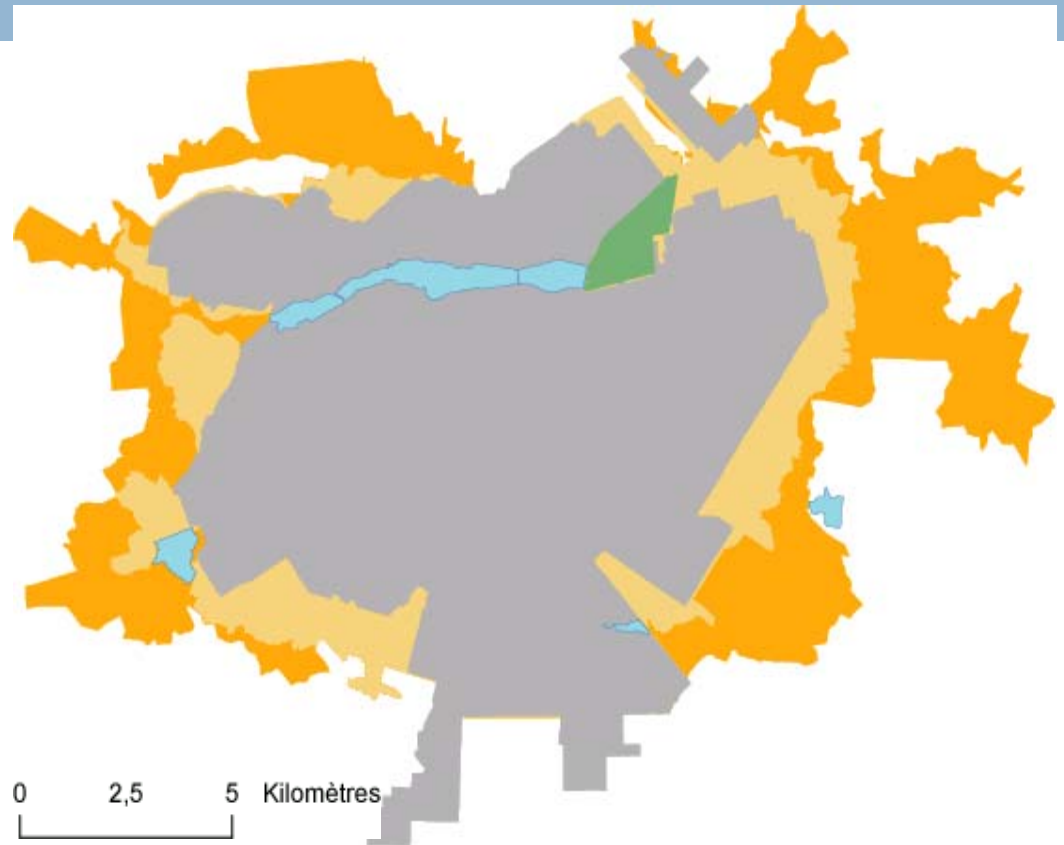
20





## Burkina Faso, Ouagadougou Cities in the City

- 237 km<sup>2</sup> in 2005
- A double process of urbanization:
  - legal (143 km<sup>2</sup>)
  - vs
  - illegal (94 km<sup>2</sup>)








# Burkina Faso, Ouagadougou Cities in the City

2



0 2,5 5 Kilomètres

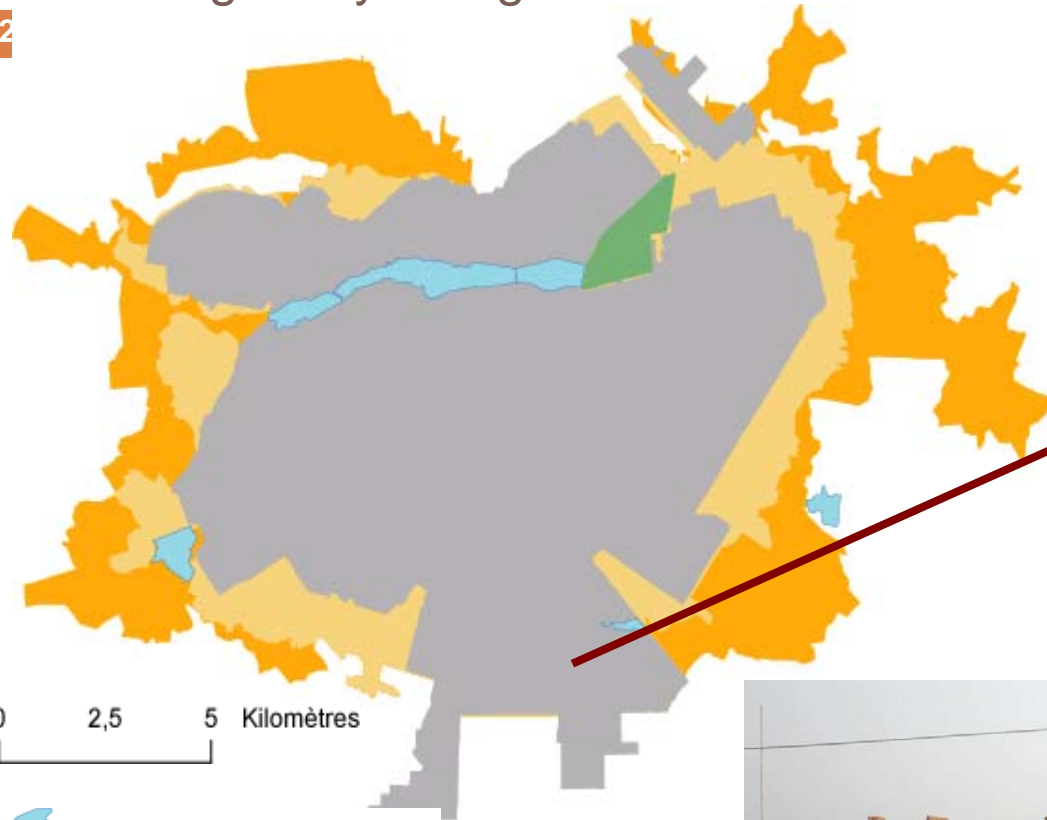
-  Barrages urbains
-  Forêt Classée du Barrage
-  Zone urbaine lotie : 143 Km<sup>2</sup>
-  Zone urbaine non lotie dense : 34 Km<sup>2</sup>
-  Zone urbaine non lotie peu dense : 60 Km<sup>2</sup>








# Burkina Faso, Ouagadougou Cities in the City

## Heterogeneity of legal zones

2



0 2,5 5 Kilomètres

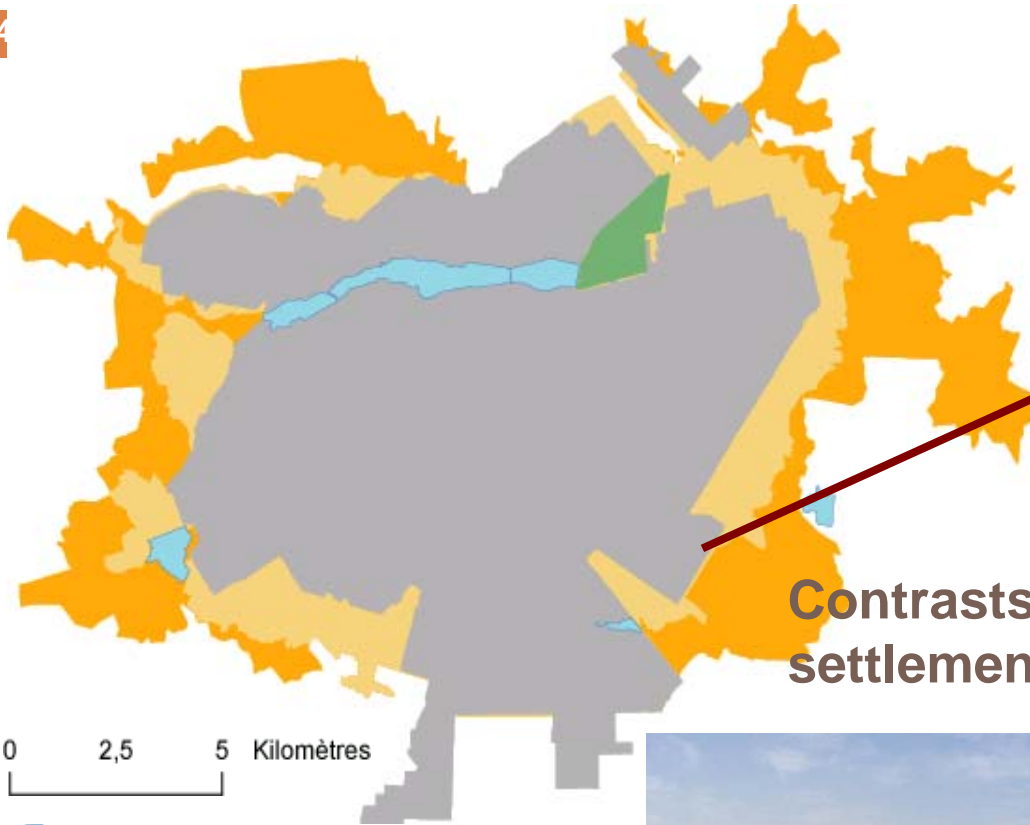
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# Burkina Faso, Ouagadougou Cities in the City

24



**Contrasts between legal and illegal settlements in the suburb**

0 2,5 5 Kilomètres

-  Barrages urbains
-  Forêt Classée du Barrage
-  Zone urbaine lotie : 143 Km<sup>2</sup>
-  Zone urbaine non lotie dense : 34 Km<sup>2</sup>
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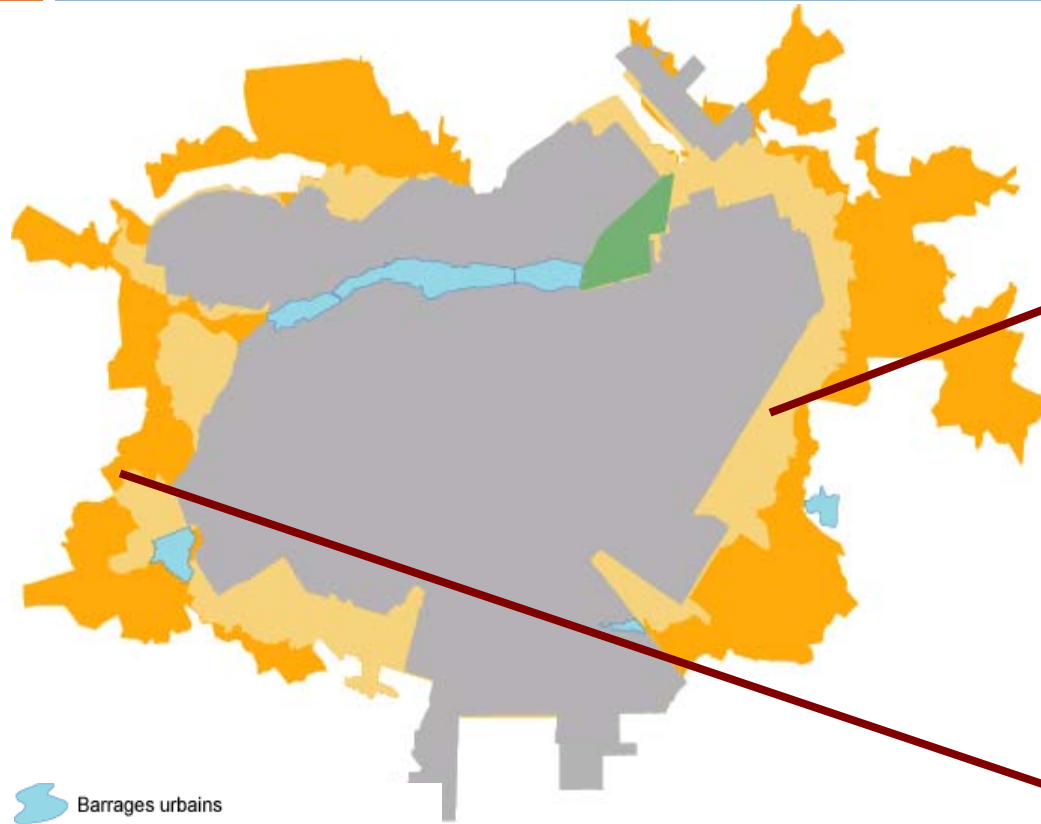
# Burkina Faso, Ouagadougou Cities in the City








**High  
Density  
in Illegal  
Districts**



**Low  
density  
in Illegal  
Districts**



-  Barrages urbains
-  Forêt Classée du Barrage
-  Zone urbaine lotie : 143 Km<sup>2</sup>
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0 2,5 5 Kilomètres



# Burkina Faso, Ouagadougou Cities in the City

## Traffic accidents in Ouagadougou





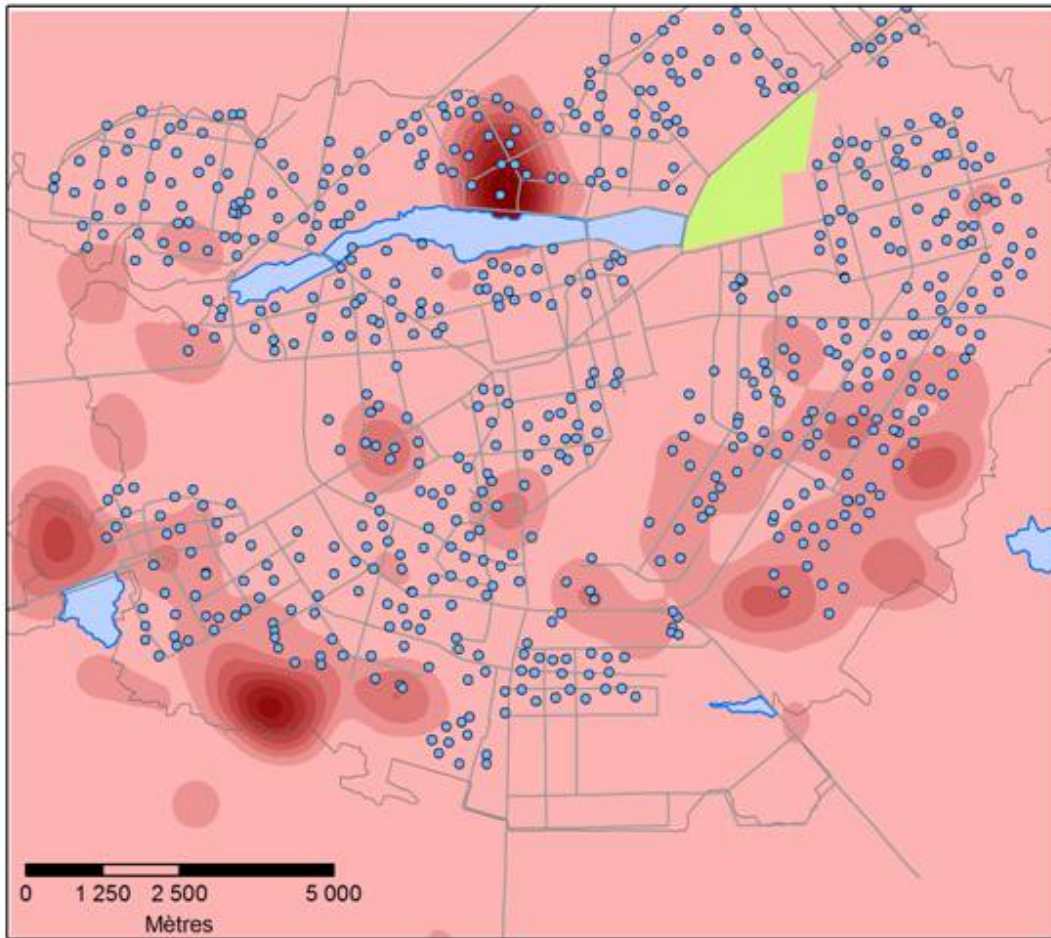
# Burkina Faso, Ouagadougou Cities in the City

## Problems of Hygiene and Sanitation in Ouagadougou (Burkina Faso)



# Burkina Faso, Ouagadougou Cities in the City

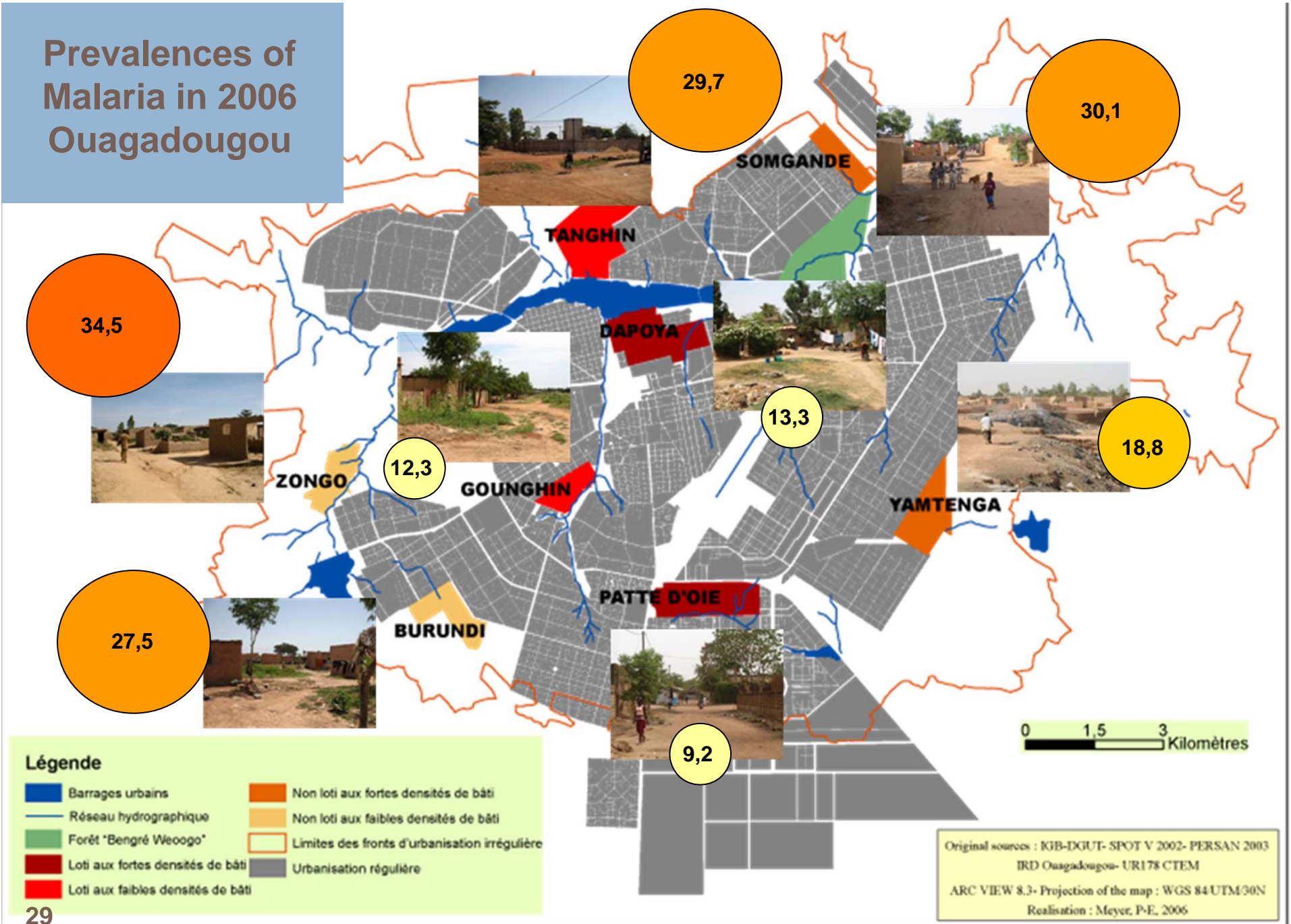
Number of cases  
of Cholera related  
to Water Pumps  
location in  
Ouagadougou



- |                            |                            |
|----------------------------|----------------------------|
| ● Borne-fontaine           | Densités de cas de choléra |
| — Principaux axes routiers | ■ Faibles densités         |
| □ Limite du non loti dense | ■ Fortes densités          |
| ■ Forêt classée            |                            |
| ■ Barrages urbains         |                            |



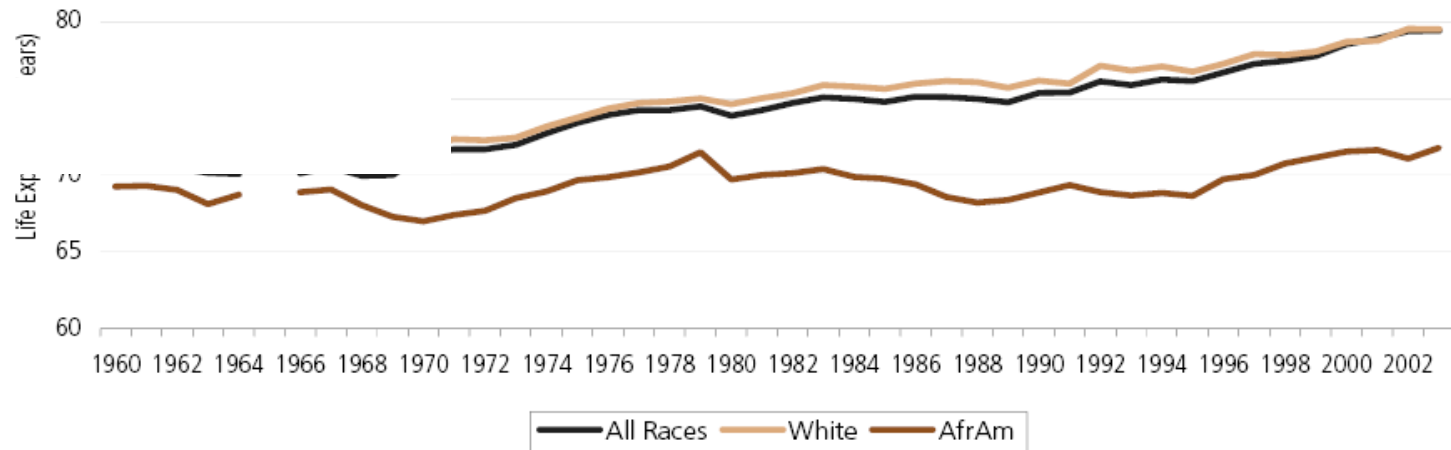
# Prevalences of Malaria in 2006 Ouagadougou



# United States of America, San Francisco Cities in the City

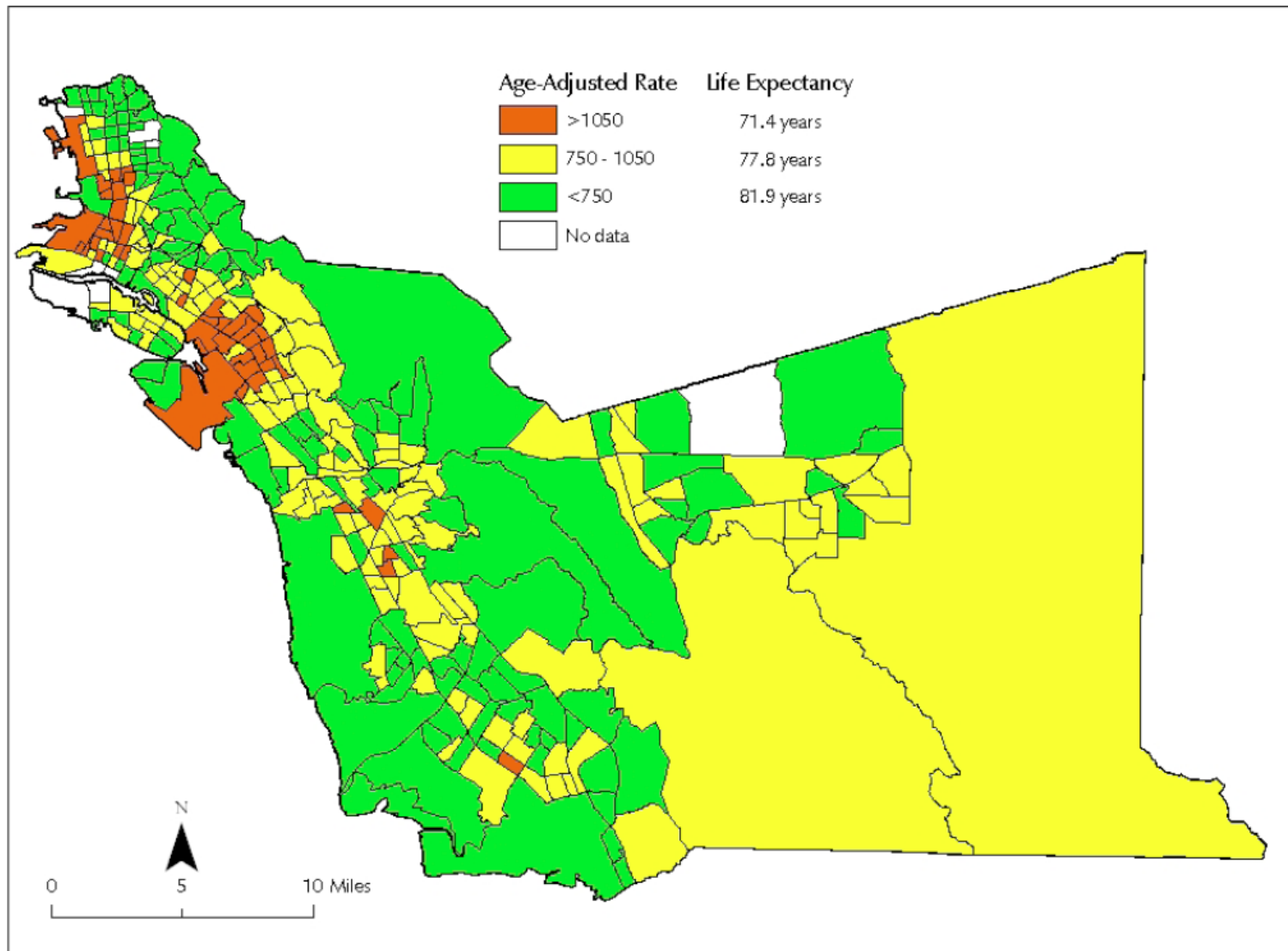


: Life Expectancy at Birth, Alameda County, 1960-2003



# United States of America, San Francisco Cities in the City

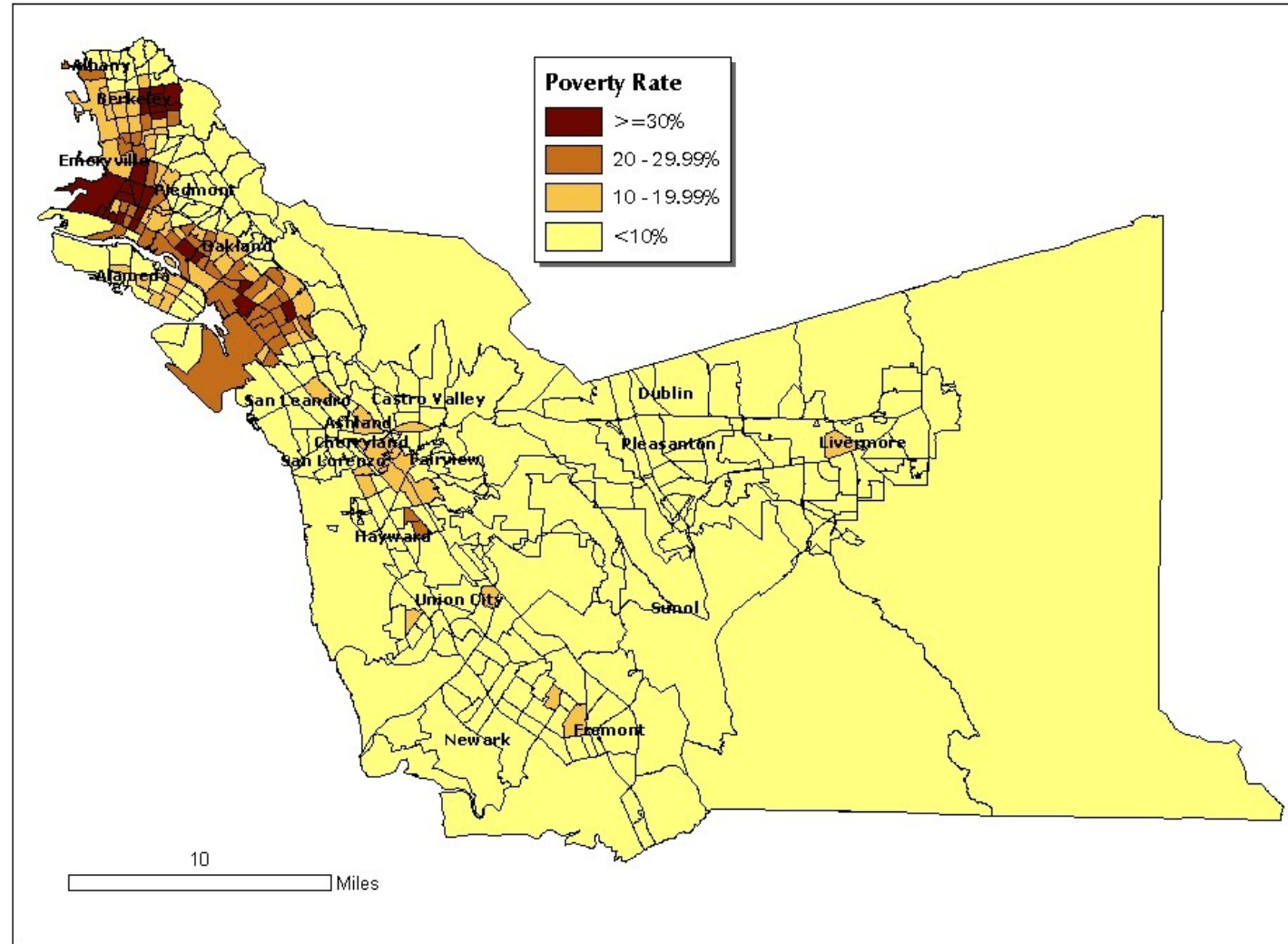
## Mortality Rate by Tract



Sources : J.  
Corburn, Un.  
Berkeley

# United States of America, San Francisco Cities in the City

## Alameda County Poverty

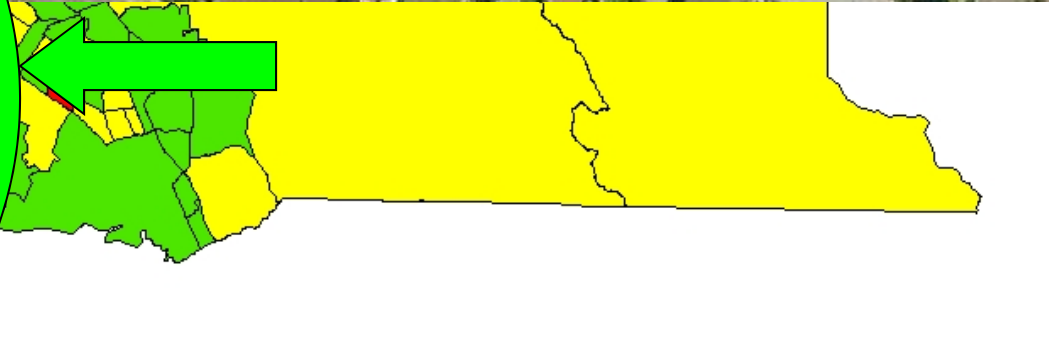
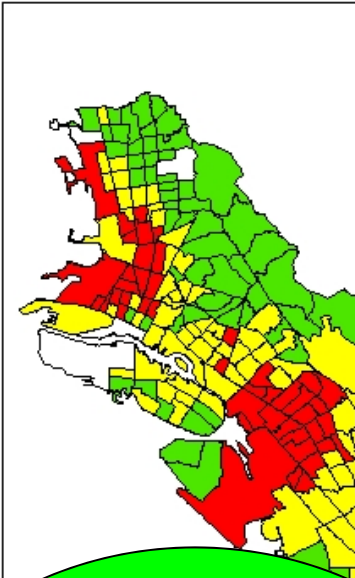


Sources : J. Corburn, Un.  
Berkeley





# Life Expectancy



High school grads: 90%  
Unemployment: 4%  
Poverty: 7%  
Home ownership: 64%  
Non-White: 49%

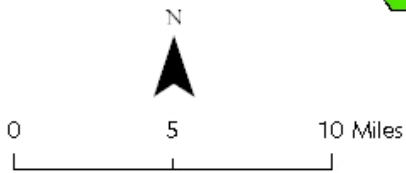
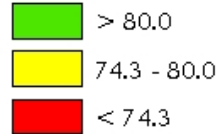
Source: CAPE, with data from vital statistics 1999-2001.



# Tract

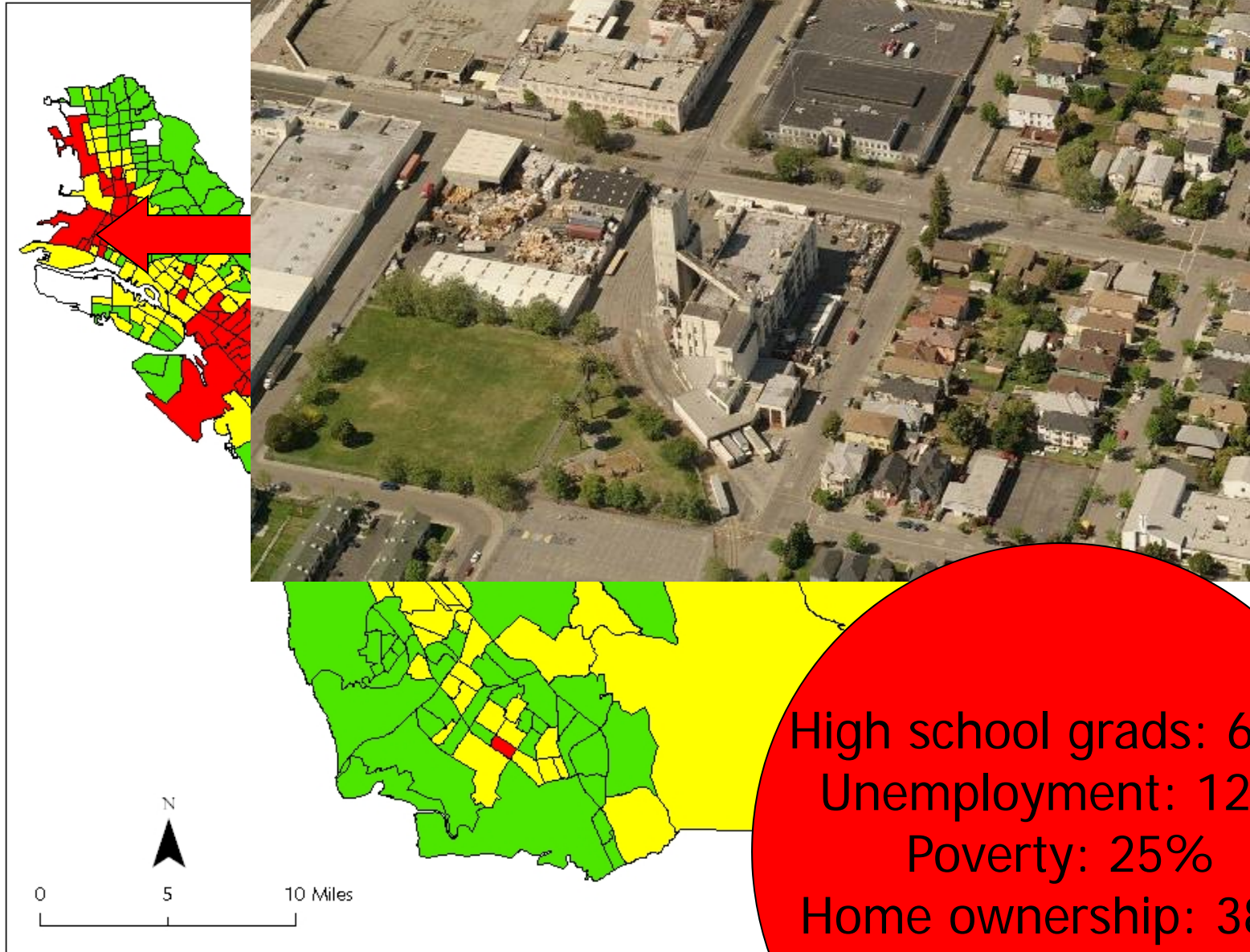
High school grads: 81%  
Unemployment: 6%  
Poverty: 10%  
Home ownership: 52%  
Non-White: 59%

## Life Expectancy at Birth

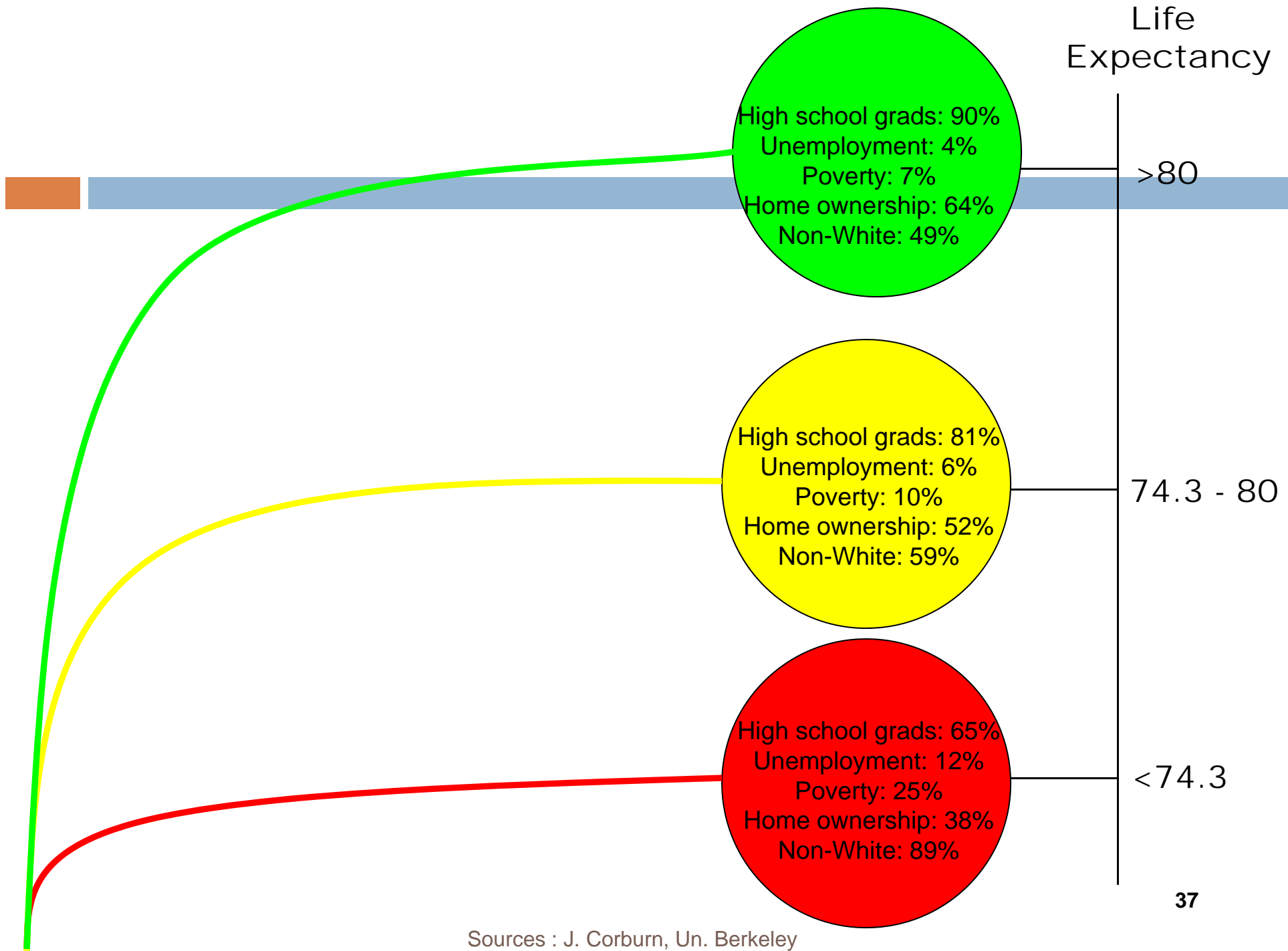




# Life Expectancy

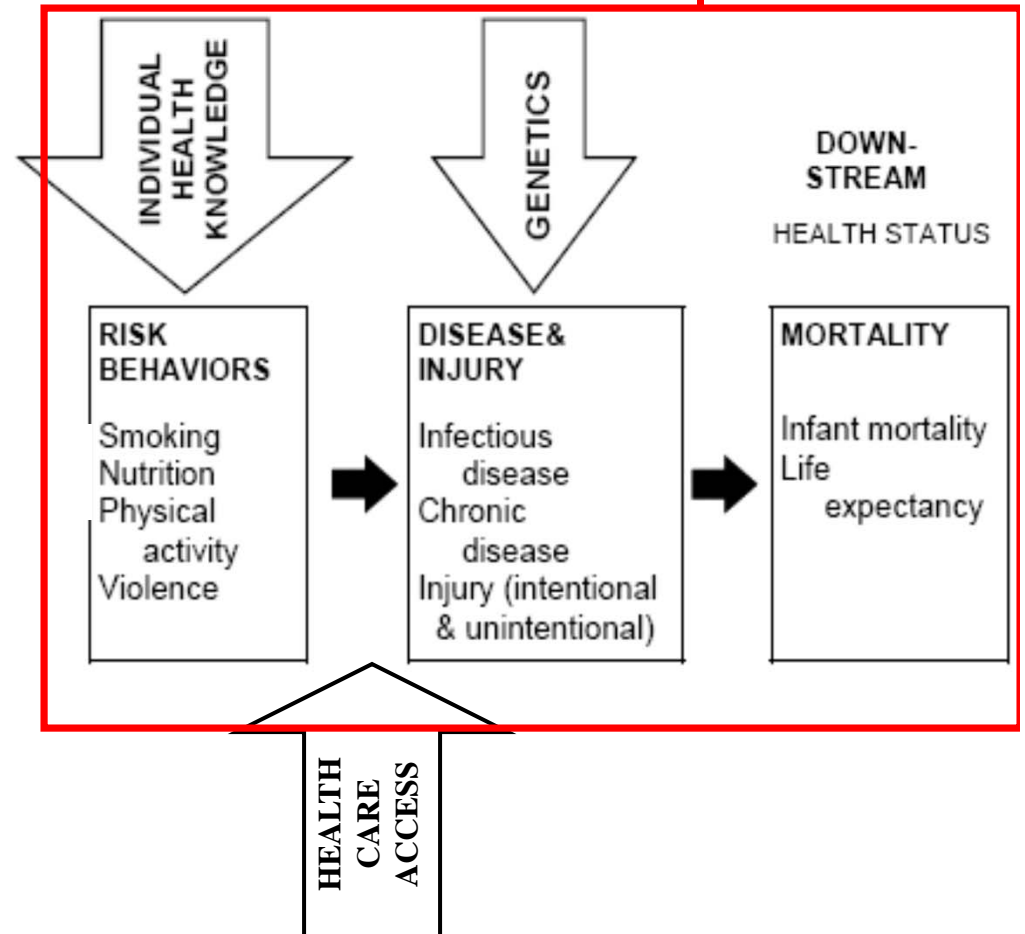


High school grads: 65%  
Unemployment: 12%  
Poverty: 25%  
Home ownership: 38%  
Non-White: 89%



Sources : J. Corburn, Un. Berkeley

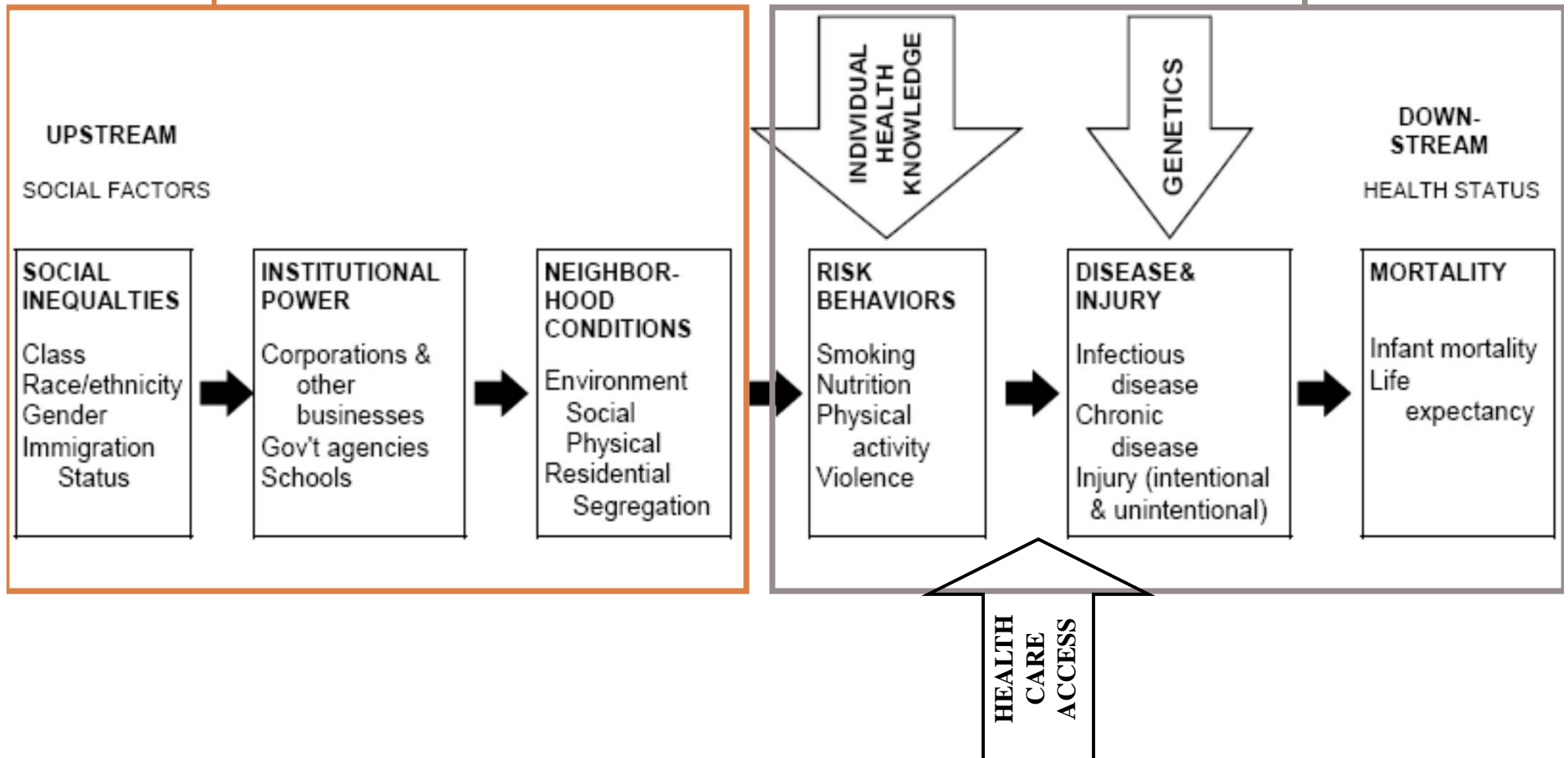
# Medical Model





## Socio-Ecological

## Medical Model



## Conclusion...

1° ) IT'S NOT AN HISTORY WRITTEN IN ADVANCE

No urban determinism !

No urban fatality !

2° ) THE CHALLENGES ?

- FOR ACTIONS

- FOR RESEARCH

- FOR TRAINING

# Priority for multidisciplinary Research



## 1- Morbidity

« New old diseases »,

New diseases,

co-morbidity



# Priority for Research



## **1- Morbidity**

## **2- Society, Territories and Health**

Links between Territorial Dynamics and Health Dynamics

ex : areas at risk, accessibility to Health Care System

Social Change, Social Control, Territorial Control and Health

# Priority for Action



- Intersectorial actions on Determinants of Health : Water, Sanitation, Housing, School, etc
- There are Cities in the City: Populations and Areas at Risks
- Central question of Information System

# Priority for training



Problems are environmental, social, economic, and cultural:

- ➔ Developing Systemic Approaches on Determinants of Health
- ➔ Fill the Gap between Specialists of Cities and Specialists of Health
- ➔ Fill the Gap between Researchers and Decisions Makers