The Impact of the Demographic Transition on Global Disease Patterns

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"Global Health in the 21st Century - celebrating 50 years of Heidelberg's contribution"

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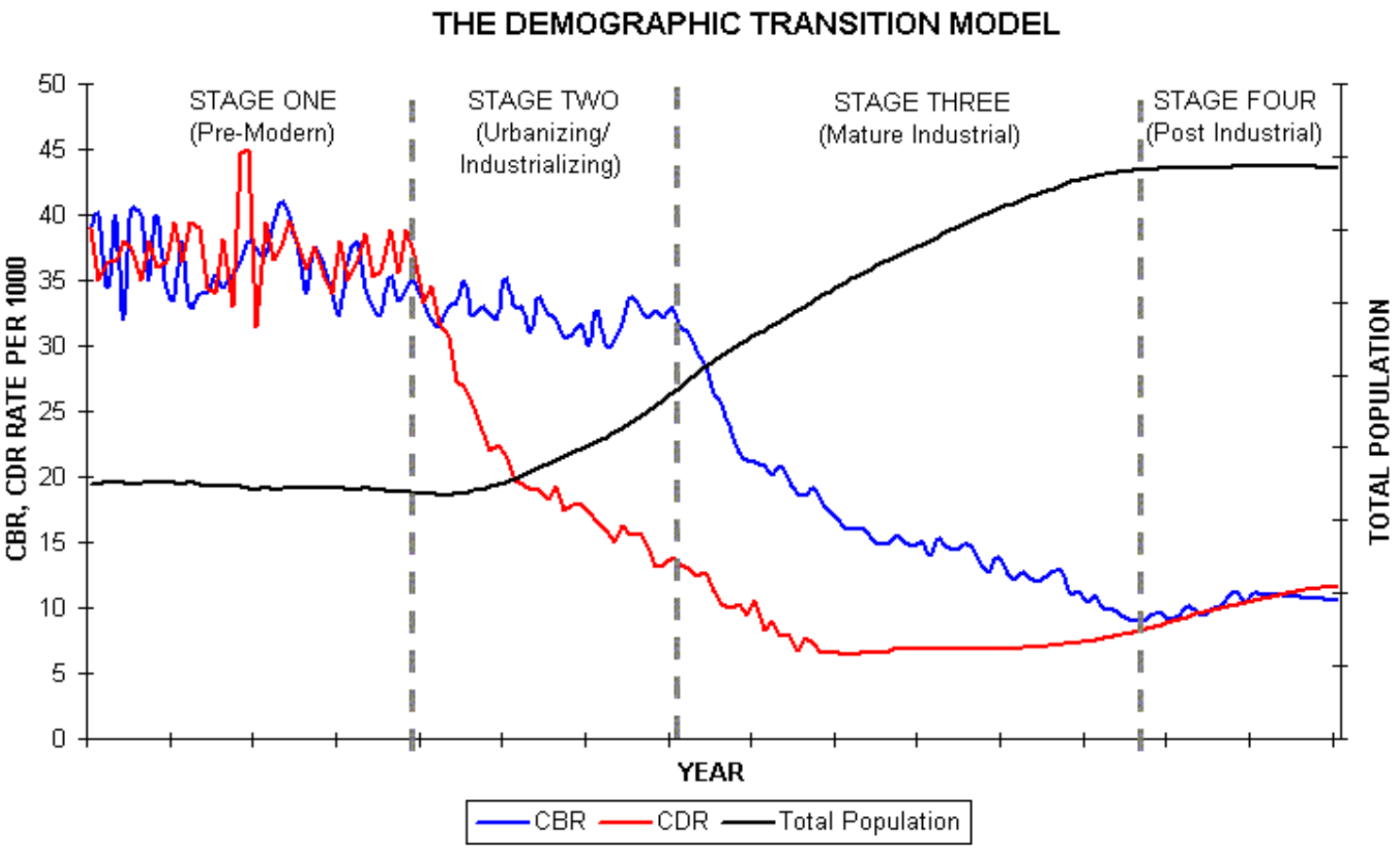
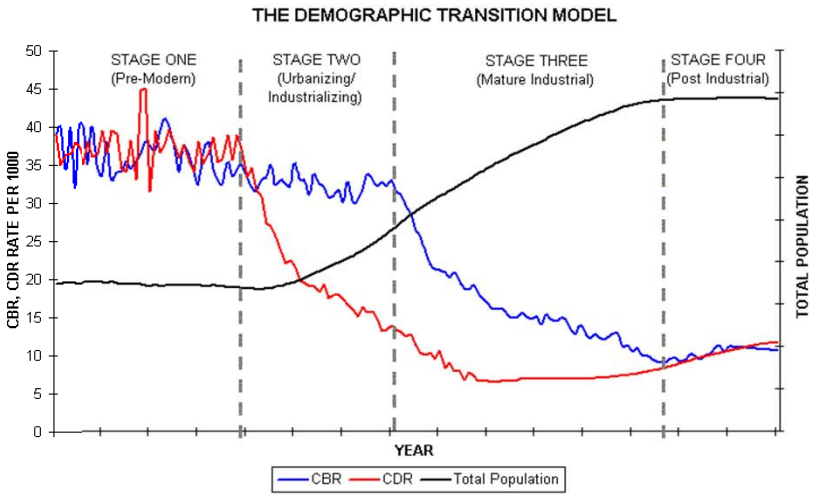
Outline

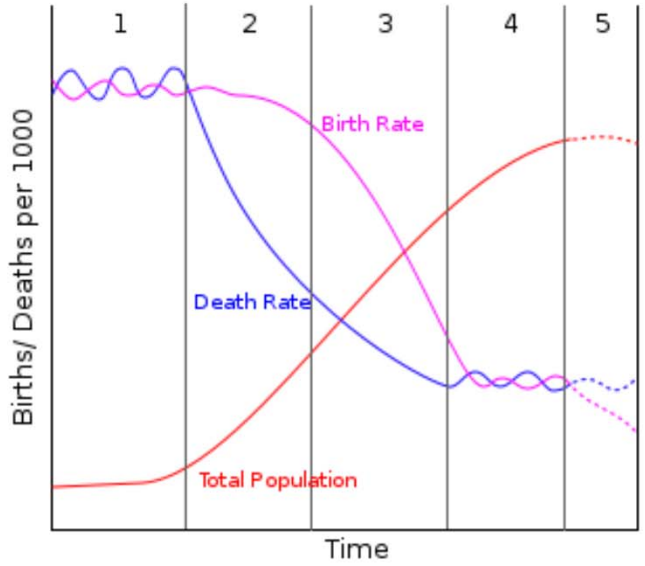
- **The Demographic Transition**
- **Key Features of the Transition**
- **Implications**
  - **On Regions of the World**
  - **Global Disease Patterns**
  - **Inequity**
- **Summary and Conclusion**

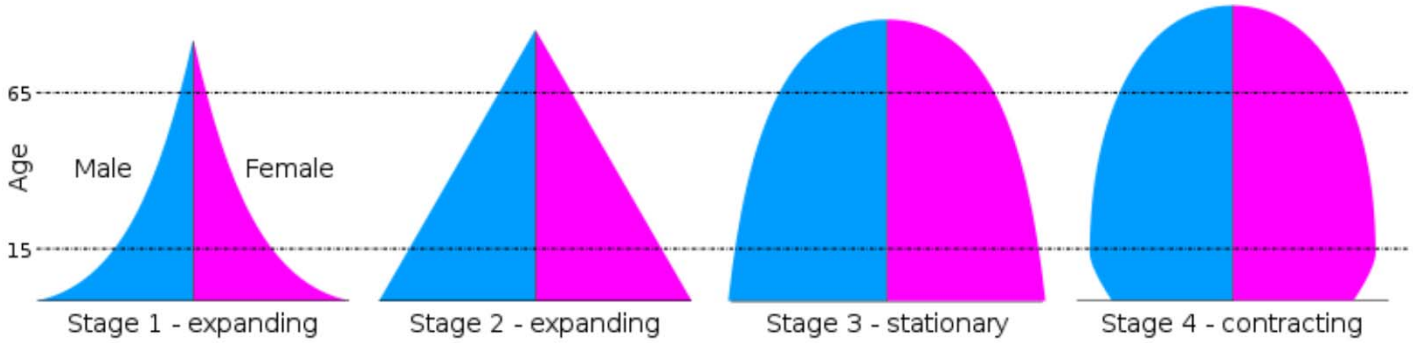
Demographic Transition



Demographic Transition







Demographic Transition

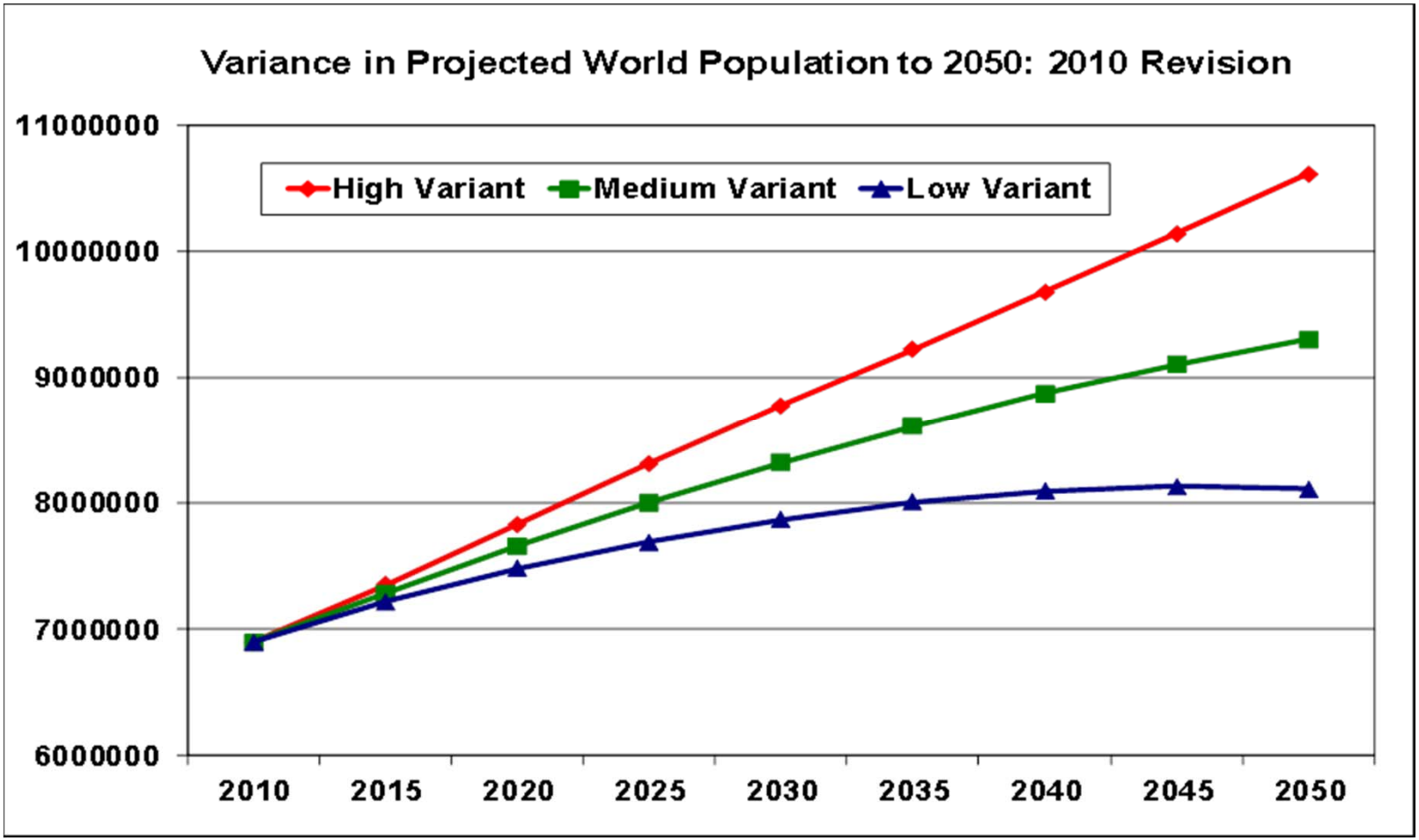
- Historical accuracy esp. in developed world (as a group)
- Transition in developing world shaped by:
  - Faster decline in death rates (death control imported and applied)
  - Fast economic growth & social change (China, Brazil…)
  - Persistently high fertility despite decline in child mortality (access to FP, SES factors, high % rural …..)
  - Higher growth rates (younger populations, momentum)
  - Emergence of infectious diseases (esp. HIV/AIDS) affecting reproductive age groups
- Many developing countries stuck in Stage 2

Key Features of the Transition

- **Overall Global Population Growth**
- **Differences by Region and Wealth**
  - **Population Ageing**
  - **Youthful Populations**
- **Urbanization /Slum growth (also driver)**

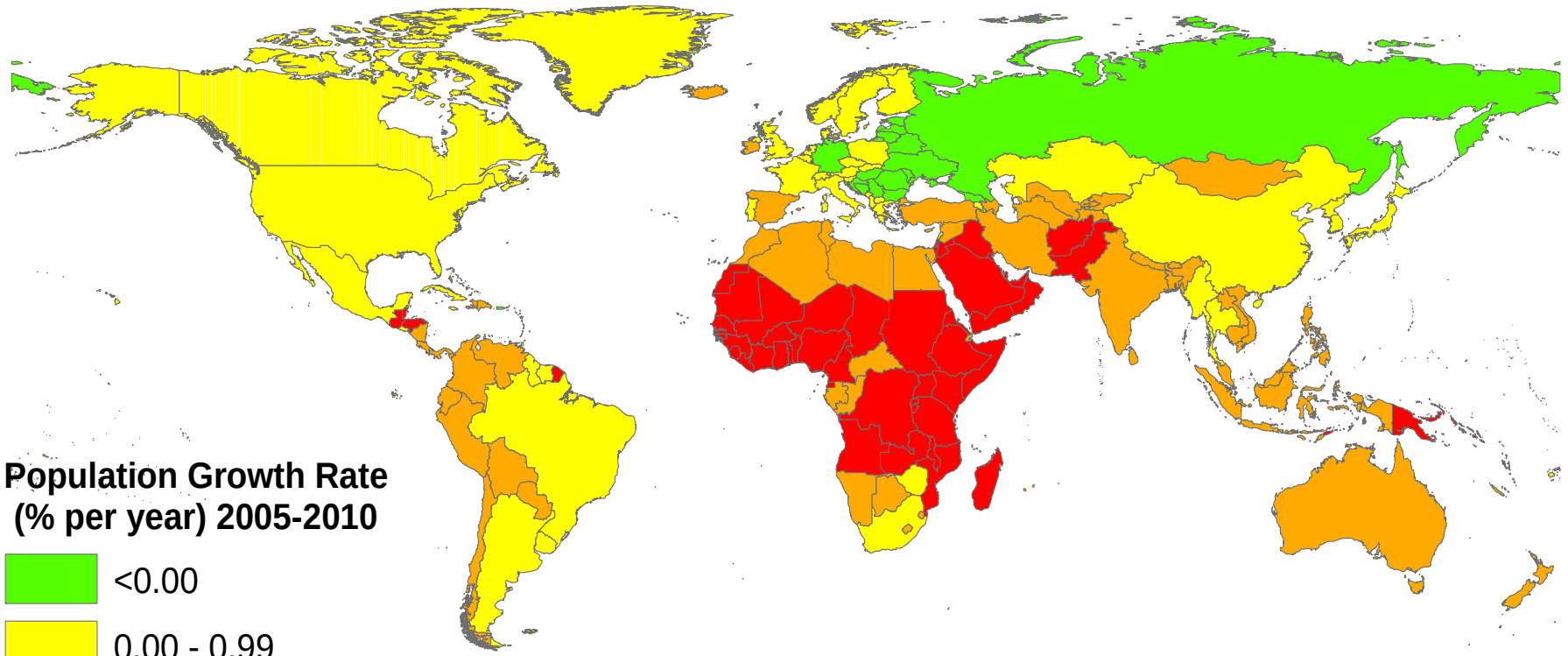
Global Population Trends

Global Population Trends – 2010 - 2050



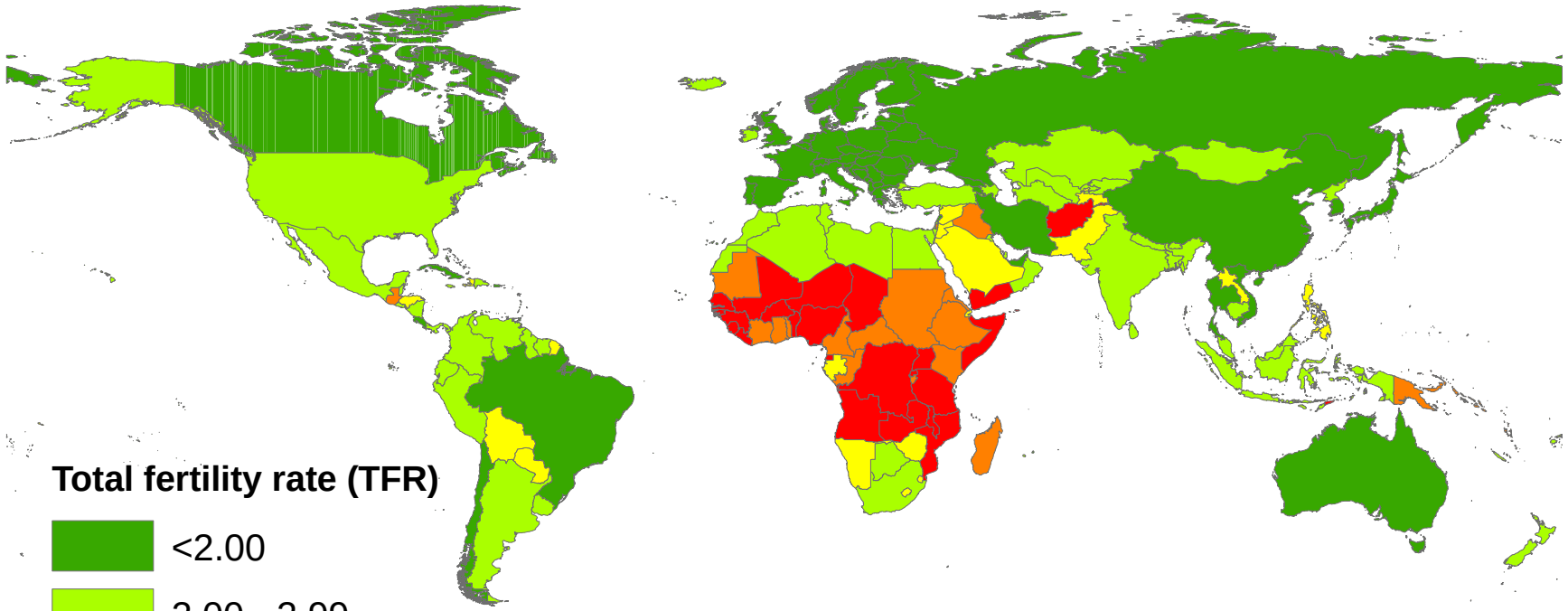
Source: United Nations 2011

Population growth rate by country



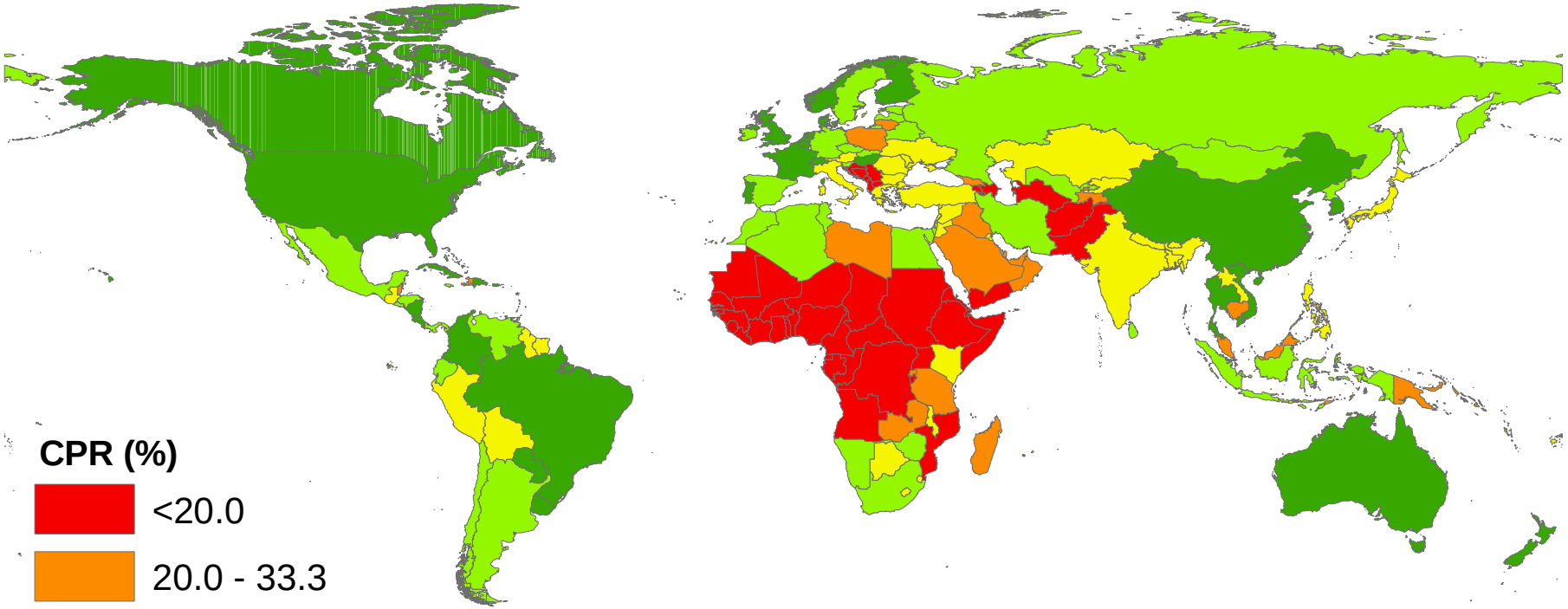
Source: United Nations 2011

Total fertility rate (TFR) by country



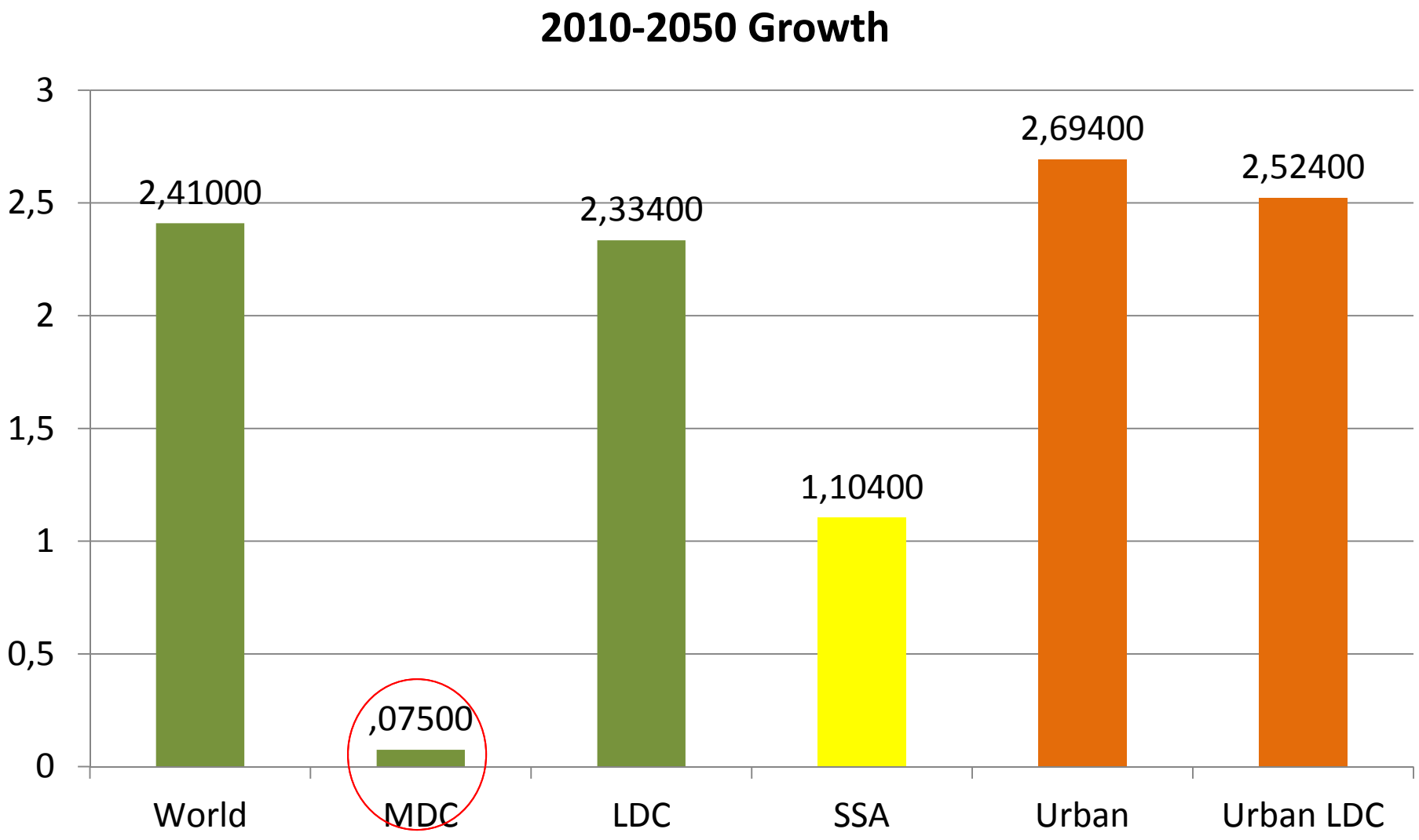
Source: United Nations 2011

Contraceptive prevalence rate (CPR) - Any modern method



Source: United Nations 2011

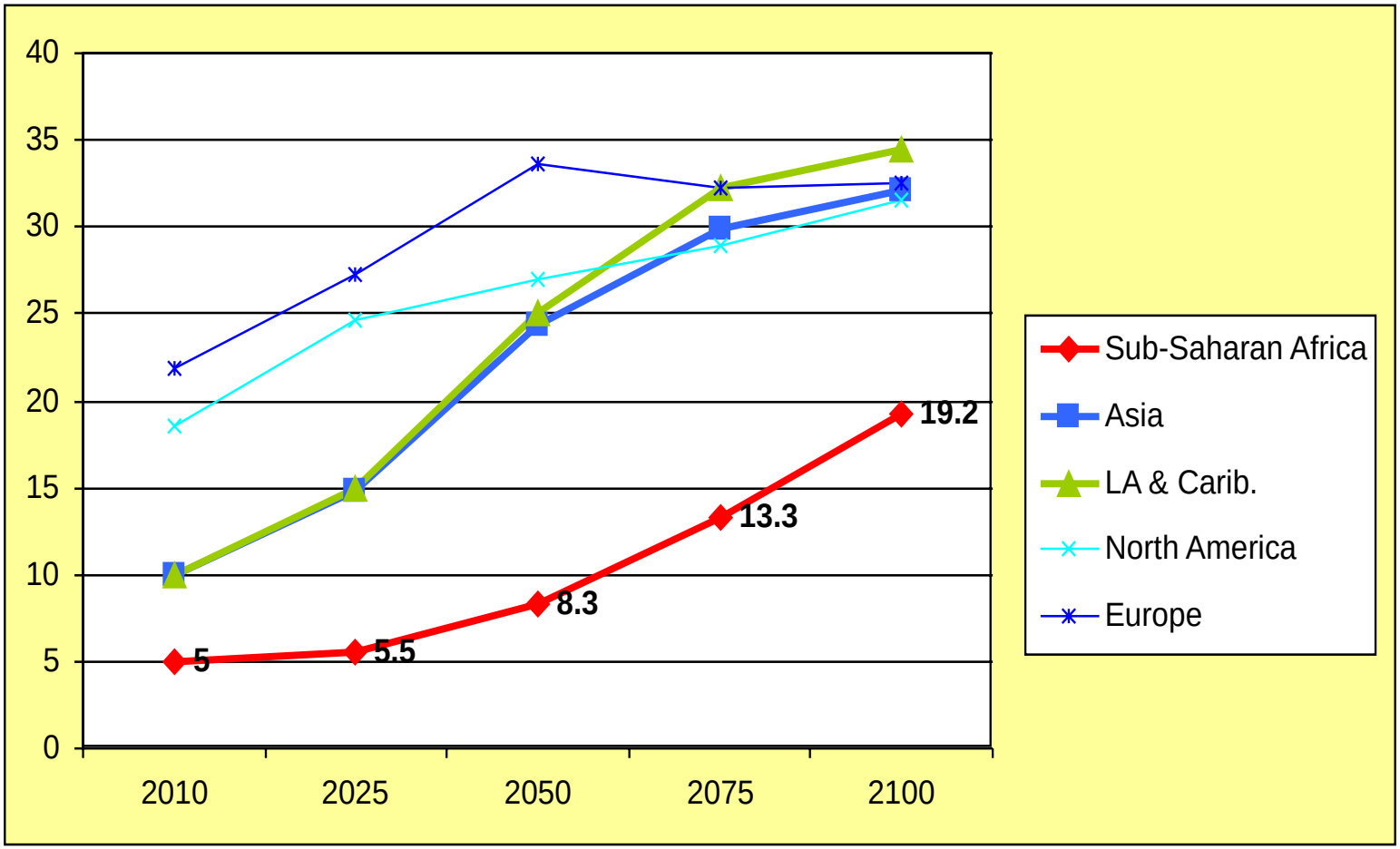
Where will the next 2.41 Billion be added?



Population Ageing

Population Ageing

Rise in population share (%) of older persons (60+), 2010-2100



Source: United Nations 2011 World Population Prospects

Population Ageing

Increase in absolute number (in millions) of older persons (60 +) 2010-2100

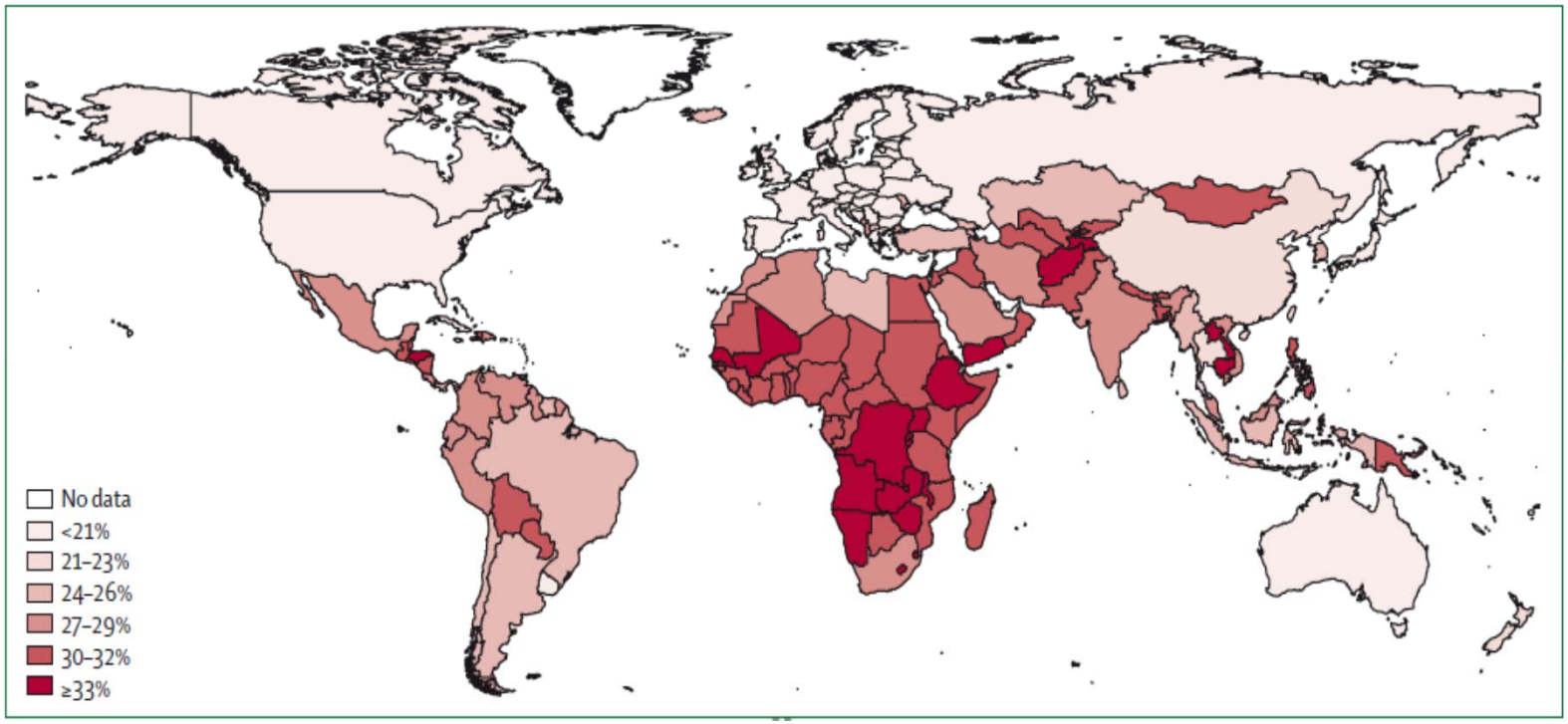
	2010	2050	2100	Increase factor (x)
Sub-Saharan Africa	43	163	644	14.9
Latin America & Caribbean	59	188	236	4.0
Asia	414	1,253	1473	3.6
North America	64	121	166	2.6
Europe	161	242	219	1.4

Source: United Nations 2011 World Population Prospects

By 2050, SSA will have more older people than N. America

Youthful Populations

Distribution of people aged 10–24 years as a % of the population

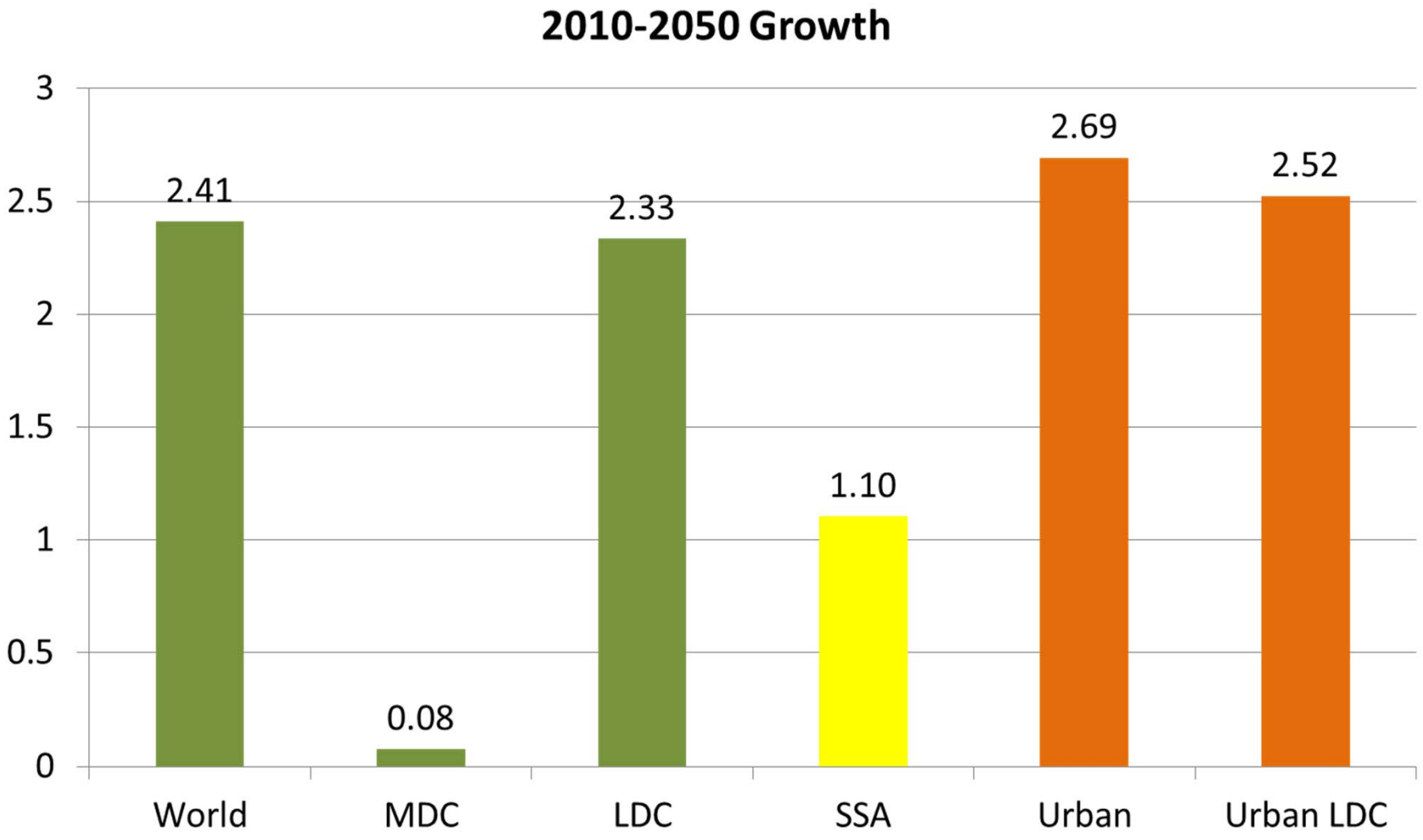


Source: United Nations, 2010 World Population Prospects (2008 revision)

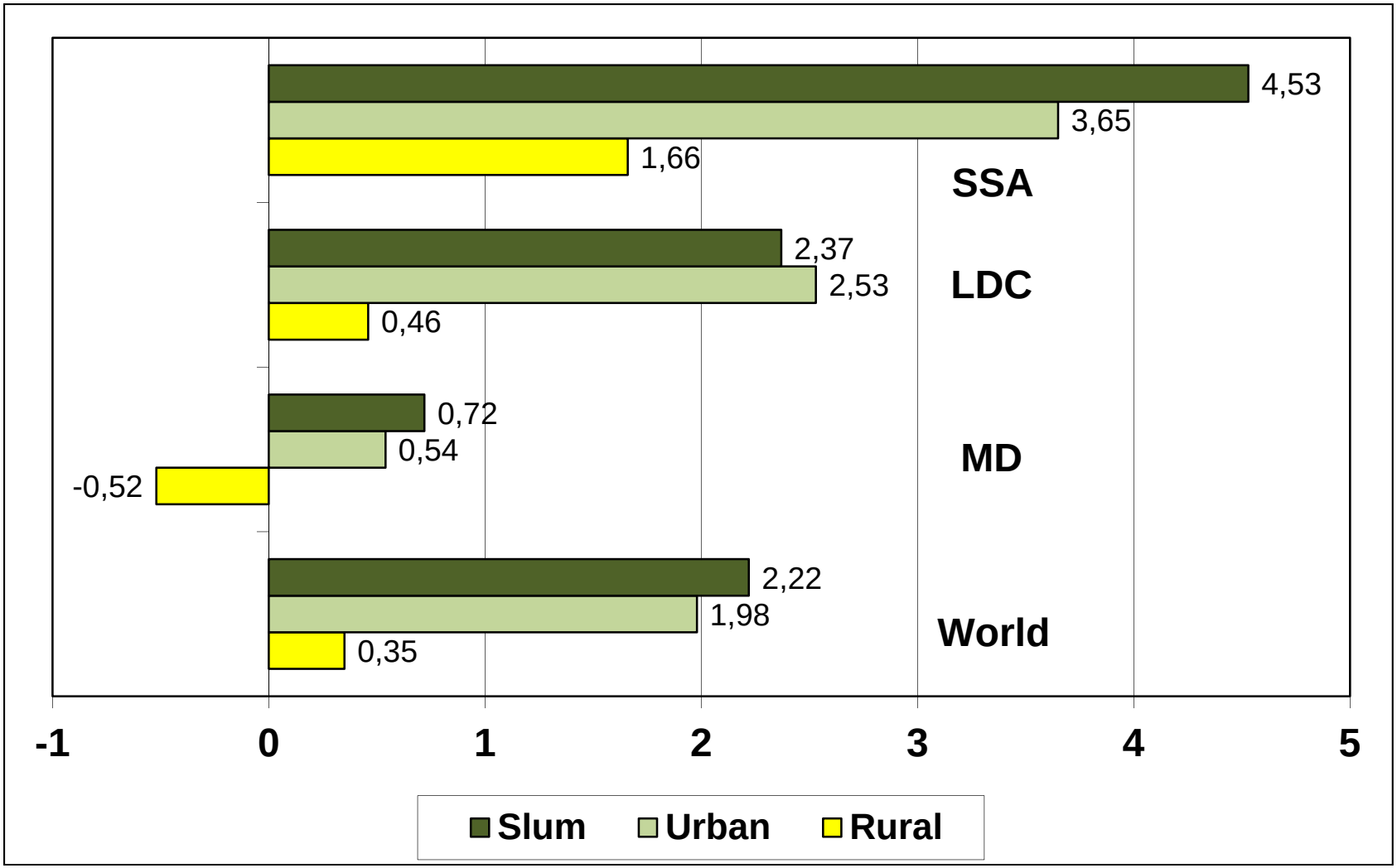
Young people constitute about 25% of current world population
17% of 13-15yr olds use tobacco
90% of Adult smokers start before the age of 20 years

Urbanization

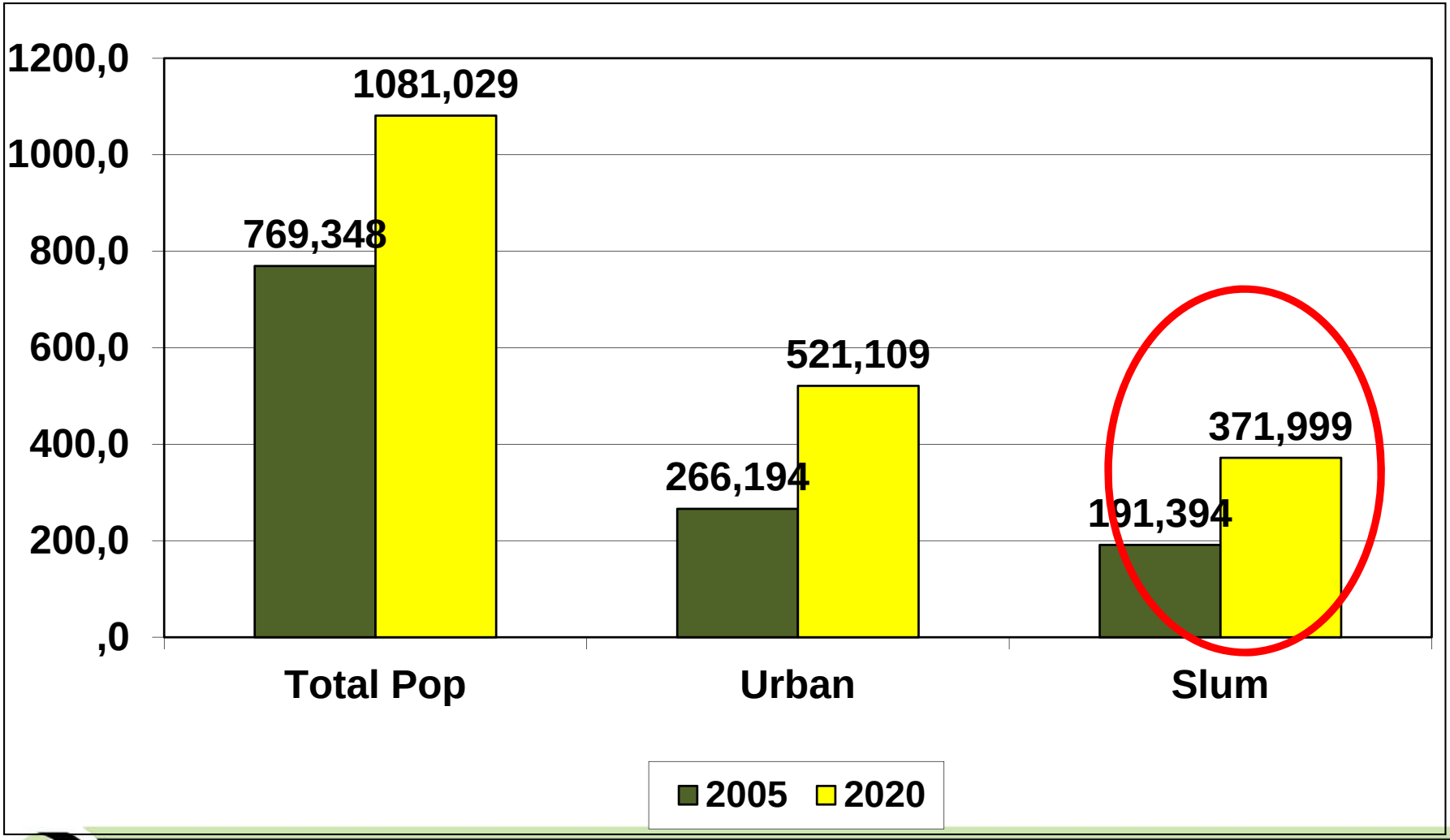
Urbanization



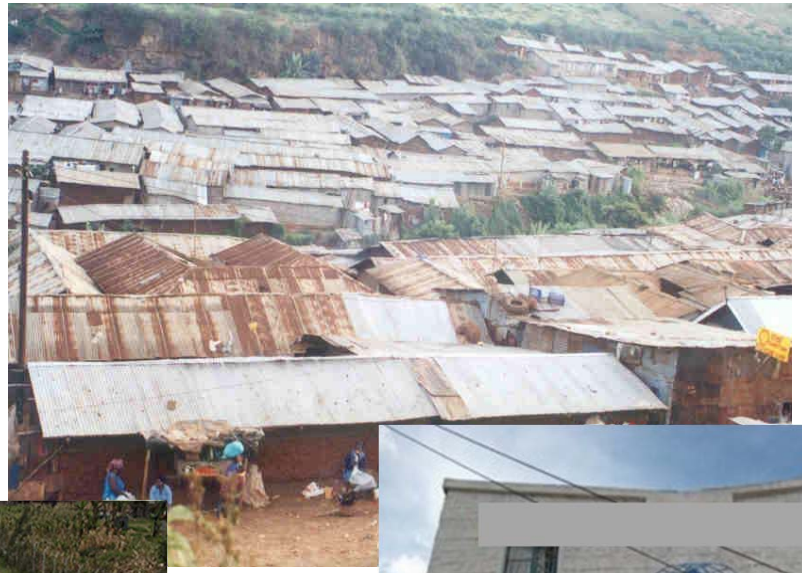
Population Growth Rate by Region and Residence, 2005-2010

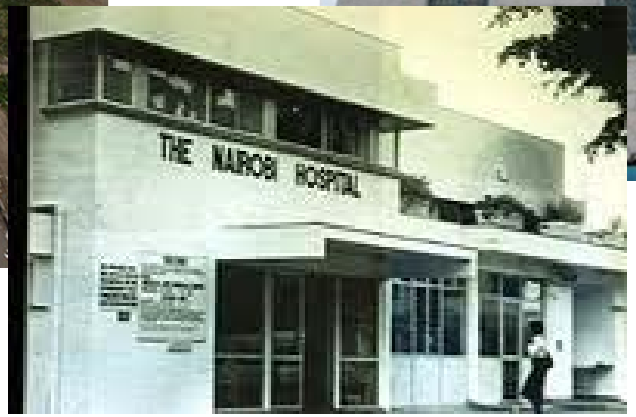


Projected Growth of Total, Urban and Slum Populations in SSA (In Millions)



The Many Faces of Nairobi





Health Challenges in Nairobi

- **Communicable diseases**
  - Overcrowding
  - Poor WASH infrastructure
  - Limited access to health services
  - High risk behaviour
- **Injuries (both intentional and unintentional)**
  - Road safety (lack thereof) with increasing traffic volumes
  - Limited access to emergency services
  - Lack of social cohesion – high interpersonal violence
  - Crime and insecurity
  - Limited access to law enforcement and judicial services
- **Non-communicable Diseases**
  - High risk behaviour
  - Environmental pollution
  - Limited access to health services

Current risk and future CVD burden

Diabetes prevalence, awareness, treatment and control – Adults 18+

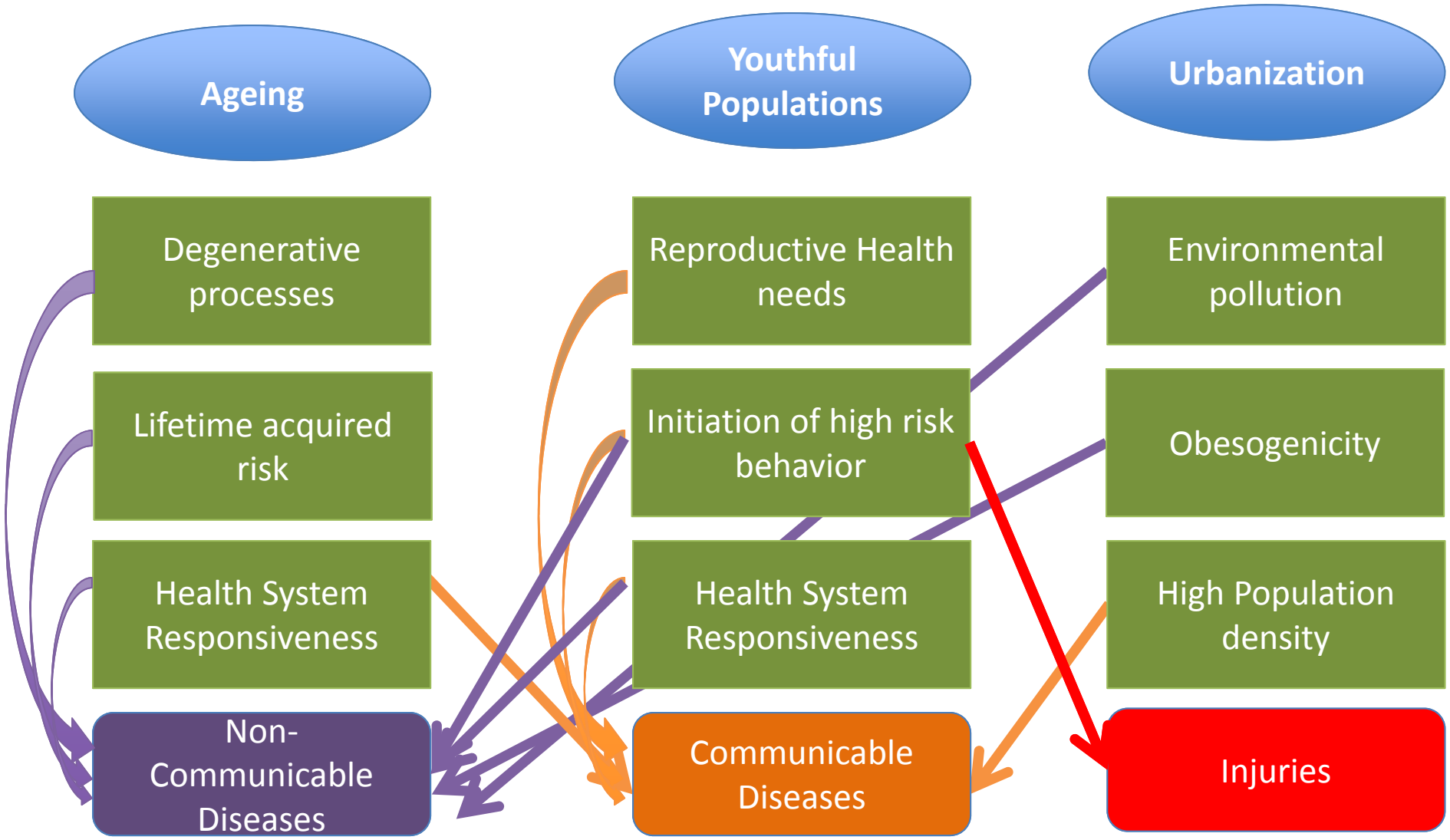
	Has diabetes (a) n=298	Aware (b) n=101	Treated (c) n=72	On treatment (d) n=52	Controlled n=23	Well Controlled n=3
As a % of N (5190)	**4.3%**	0.9%	NA	NA	NA	NA
As a % of (a)	NA	**19.9%**	13.4%	10.3%	4.5%	**0.7%**
As a % of (b)	NA	NA	**67.5%**	**51.8%**	**22.5%**	**3.5%**
As a % of (c)	NA	NA	NA	**70.4%**	26.9%	**5.2%**
As a % of (d)	NA	NA	NA	NA	**43.3%**	**6.7%**

Findings on High Blood Pressure not any different

Undetected , untreated and uncontrolled risk factors point to a future huge burden of CVD

Implications on Global Disease Patterns

Implications of Key Demographic Trends



Implications of Key Demographic Trends

Inequity

- **Existing inter-country inequalities by wealth, in mortality burden maintained**
- **Intra-country inequities**
- **Intra-urban inequities**

Conclusion

A combination of key demographic trends will ensure that non-communicable disease **maintain** their dominant place as the main contributor to the global burden of disease….. and **obtain** this place in all regions of the world

Happy 50Th Anniversary, IPH

Thank You for Your Attention

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