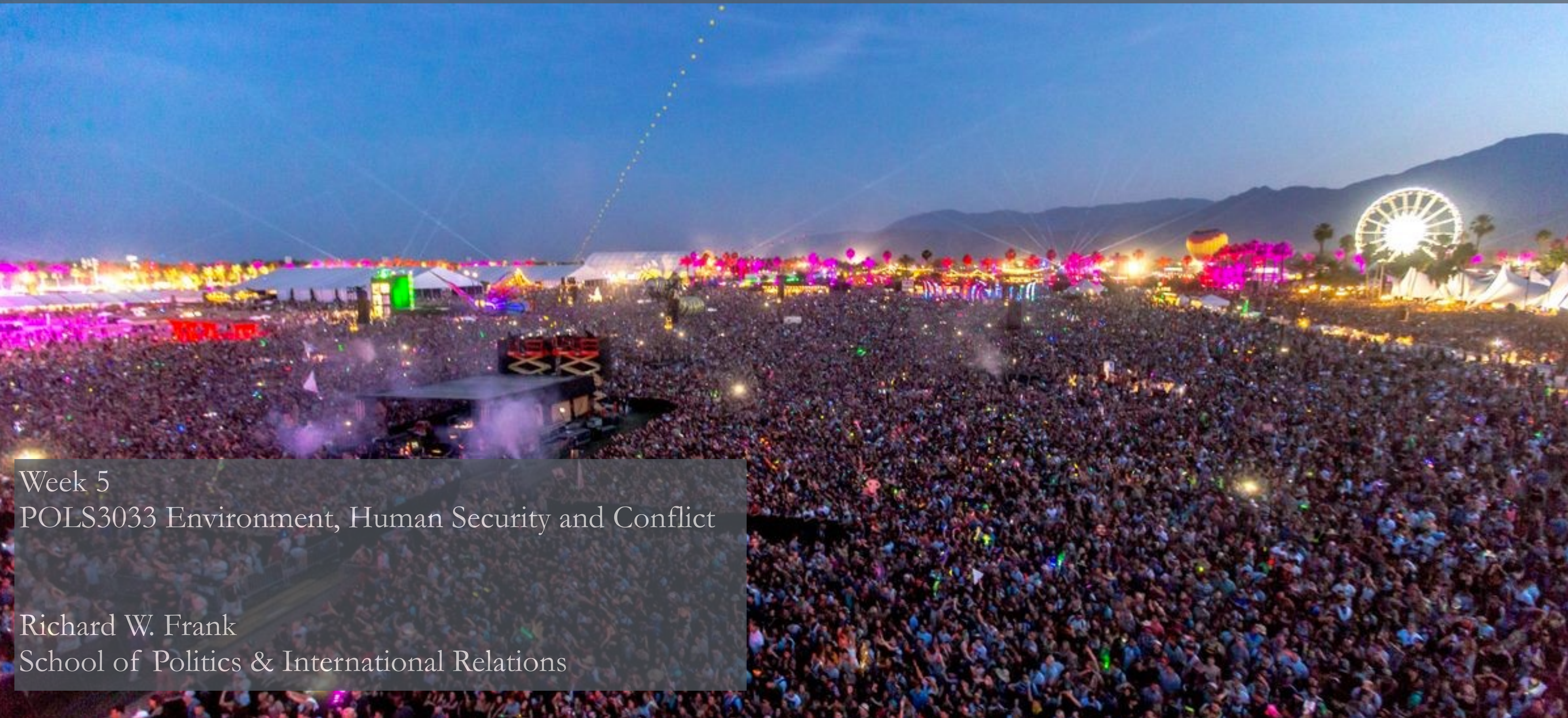


Population



Week 5
POLS3033 Environment, Human Security and Conflict

Richard W. Frank
School of Politics & International Relations

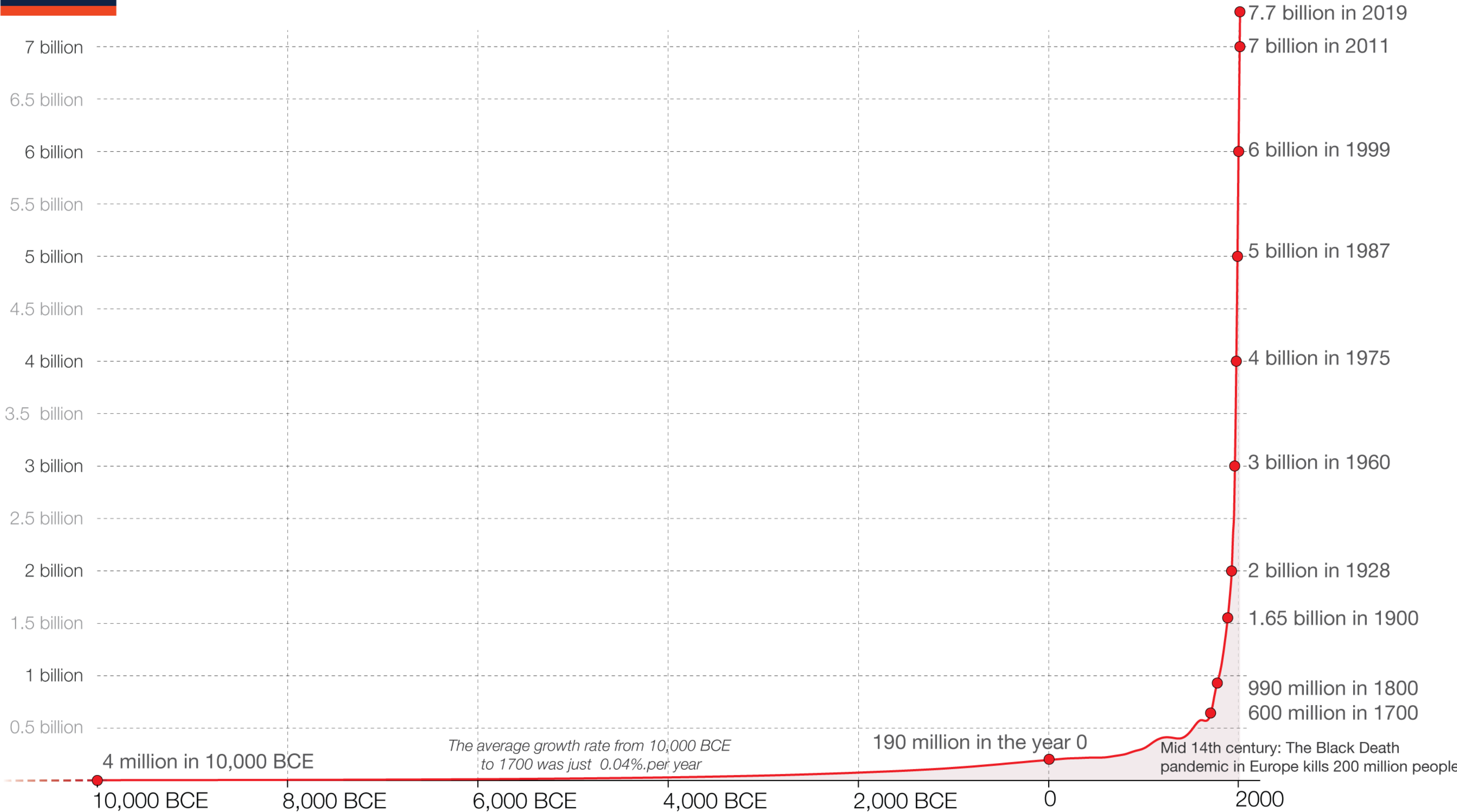
I. Population pressures and conflict



Source: https://commons.wikimedia.org/wiki/File:Photograph_of_a_large_crowd_gathered_outside_the_Willard_Hotel_in_Washington_to_welcome_General_Dwight_D._Eisenhower._-_NARA_-_199115.jpg

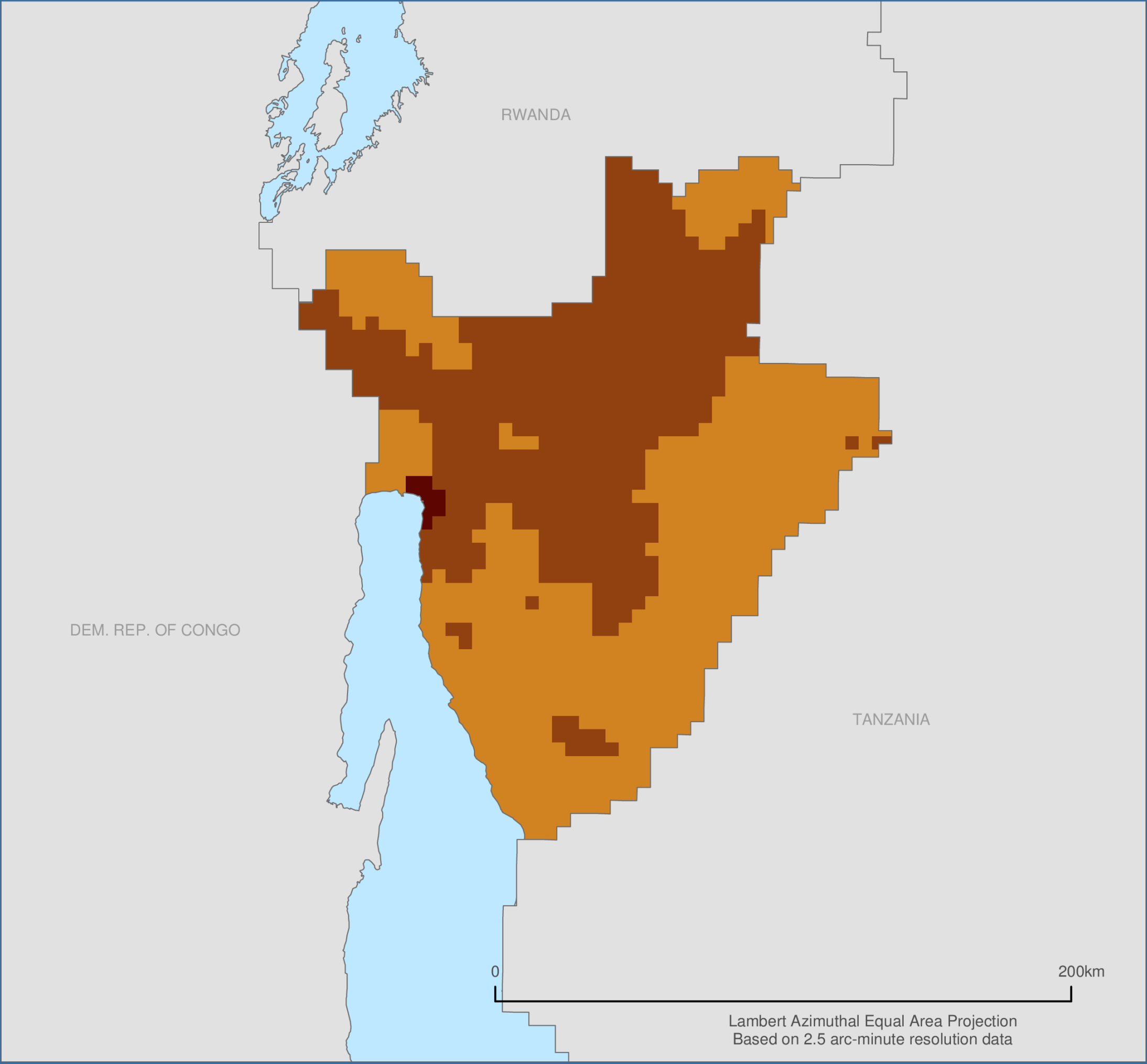
Week	Summary
Section 1: Defining terms, actors, and interests	
Week 1	Introduction, course overview, and conflict
Week 2	Economic development and economic instability
Week 3	Political institutions and instability
Week 4	Environmental change and scarcity
Section 2: Causes	
Week 5	Population
Week 6	Migration
	<i>Teaching break (no class)</i>
Week 7	Water
Week 8	Food
Week 9	Natural resources
Week 10	Natural disaster
Section 3: Responses	
Week 11	Domestic responses
Week 12	International cooperation

The size of the world population over the last 12.000 years

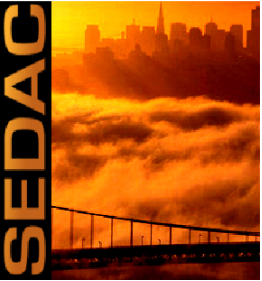
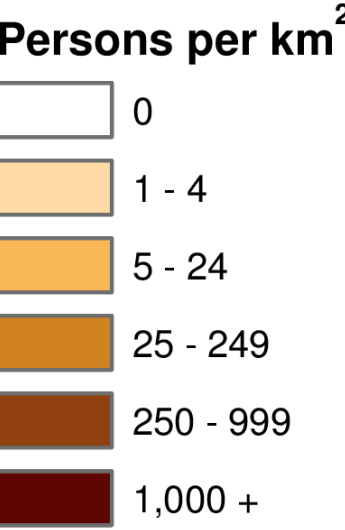


Based on estimates by the *History Database of the Global Environment* (HYDE) and the United Nations. On [OurWorldinData.org](https://ourworldindata.org) you can download the annual data.
This is a visualization from [OurWorldinData.org](https://ourworldindata.org), where you find data and research on how the world is changing. Licensed under [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) by the author Max Roser.

Source: <https://ourworldindata.org/world-population-growth>



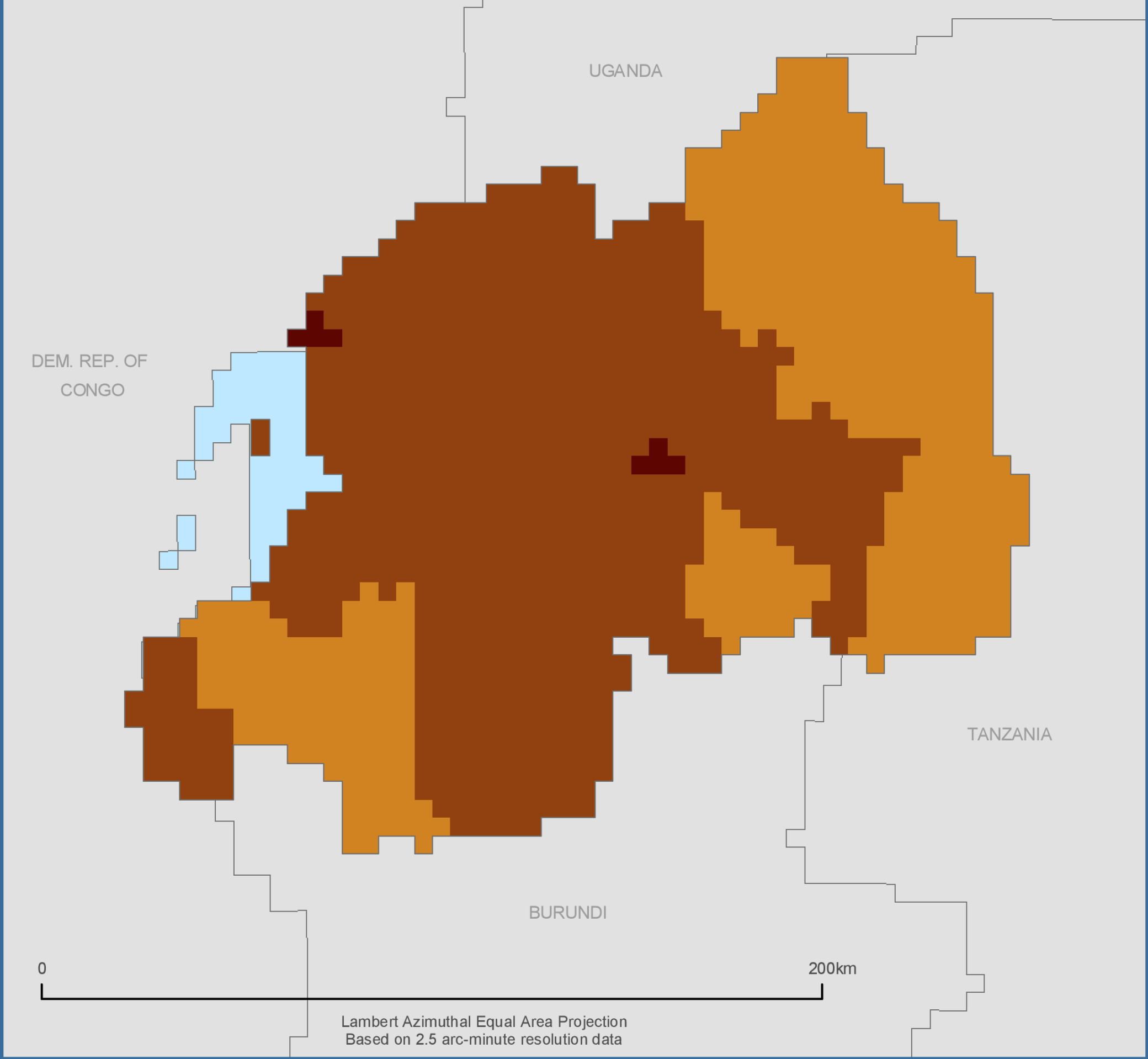
Gridded Population of the World



Copyright 2005. The Trustees of Columbia University in the City of New York.
Source: Center for International Earth Science Information Network (CIESIN),
Columbia University; and Centro Internacional de Agricultura Tropical (CIAT),
Gridded Population of the World (GPW), Version 3. Palisades, NY: CIESIN,
Columbia University. Available at: <http://sedac.ciesin.columbia.edu/gpw>.
NOTE: National boundaries are derived from the population grids and thus may appear coarse.



This document is licensed under a
Creative Commons 3.0 Attribution License



Gridded Population of the World

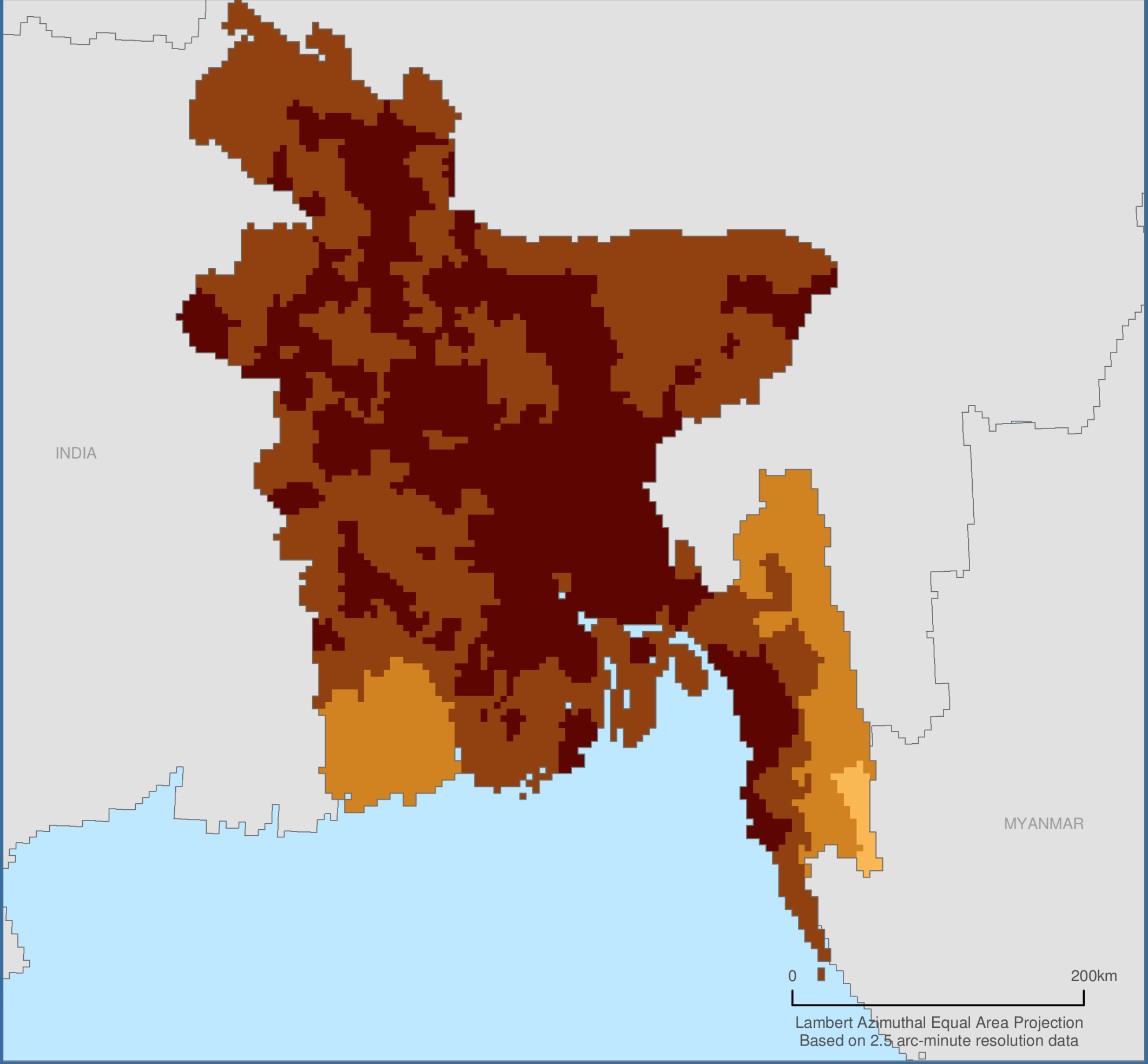
Persons per km²

- 0
- 1 - 4
- 5 - 24
- 25 - 249
- 250 - 999
- 1,000 +

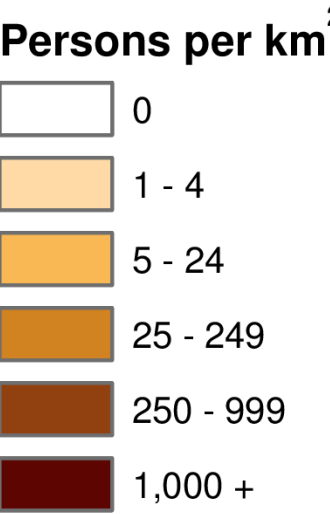


Copyright 2005. The Trustees of Columbia University in the City of New York. Source: Center for International Earth Science Information Network (CIESIN), Columbia University; and Centro Internacional de Agricultura Tropical (CIAT), Gridded Population of the World (GPW), Version 3. Palisades, NY: CIESIN, Columbia University. Available at: <http://sedac.ciesin.columbia.edu/gpw>.

NOTE: National boundaries are derived from the population grids and thus may appear coarse.

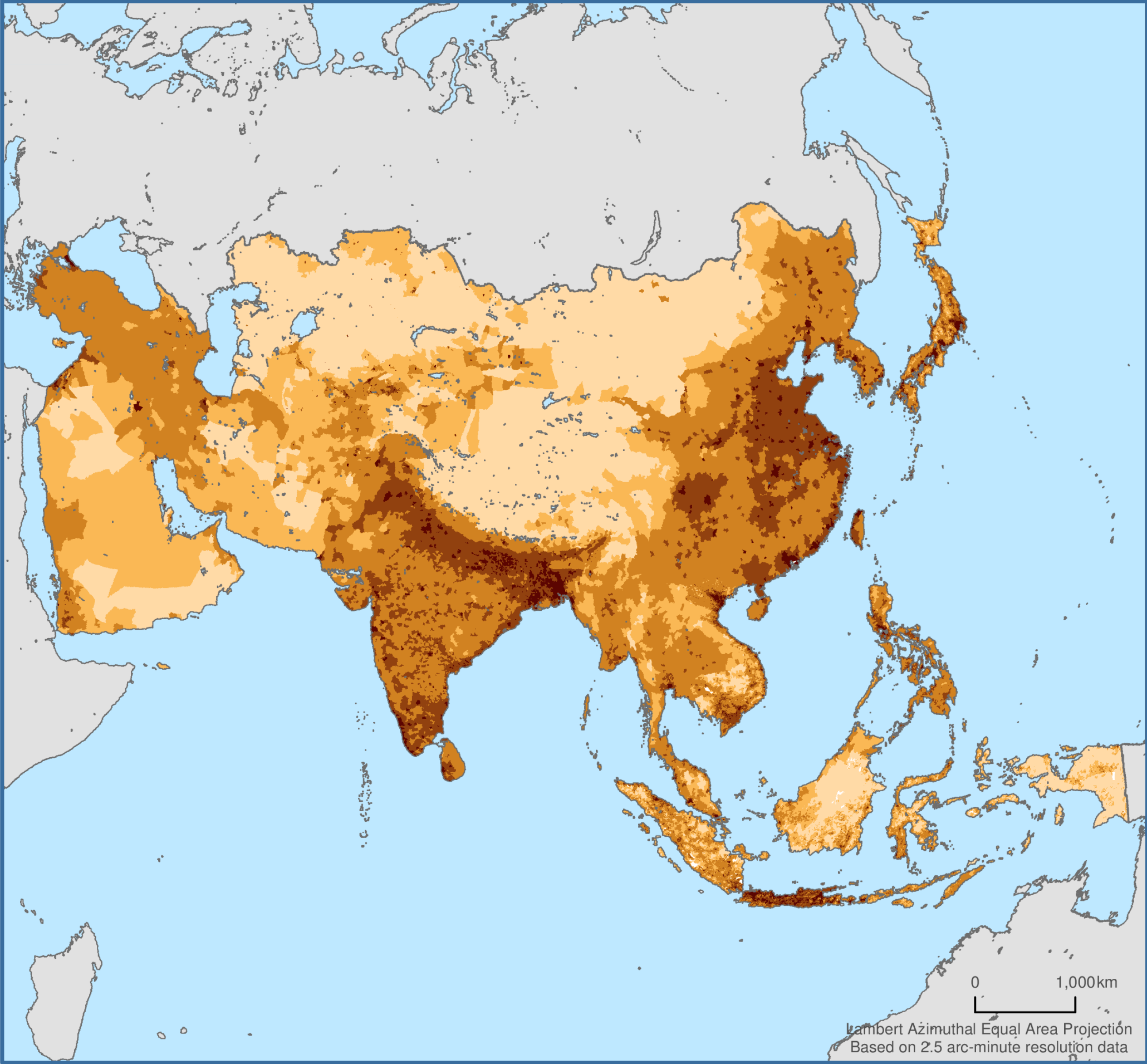


Gridded Population of the World



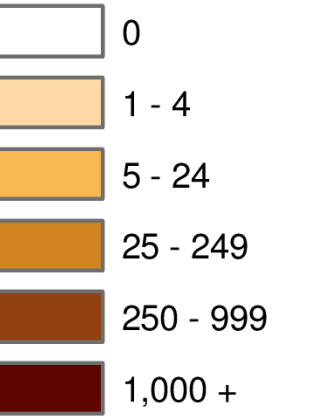
Copyright 2005. The Trustees of Columbia University in the City of New York.
Source: Center for International Earth Science Information Network (CIESIN),
Columbia University; and Centro Internacional de Agricultura Tropical (CIAT),
Gridded Population of the World (GPW), Version 3. Palisades, NY: CIESIN,
Columbia University. Available at: <http://sedac.ciesin.columbia.edu/gpw>.

*NOTE: National boundaries are derived from the population grids and thus
may appear coarse.*



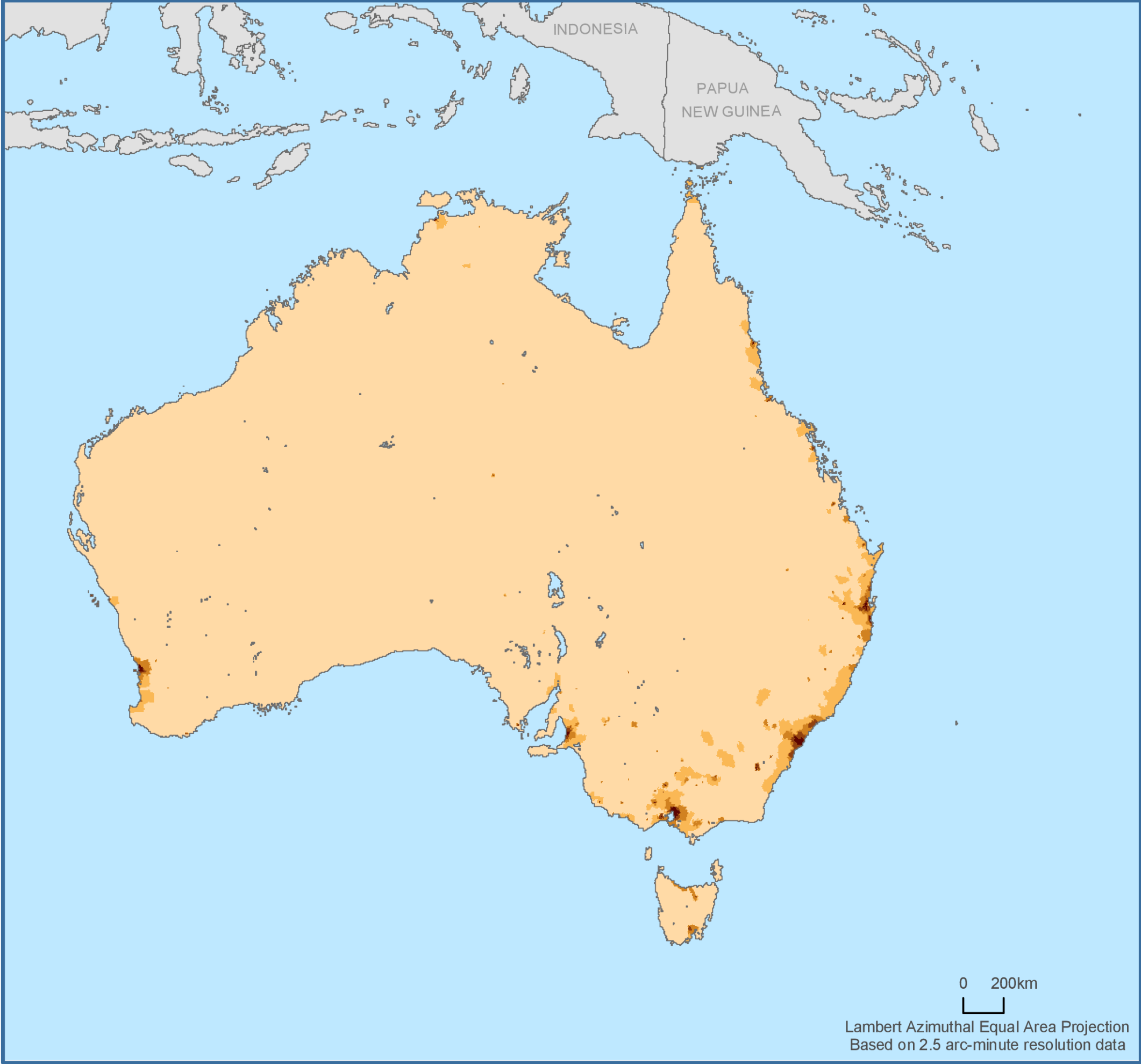
Gridded Population of the World

Persons per km²

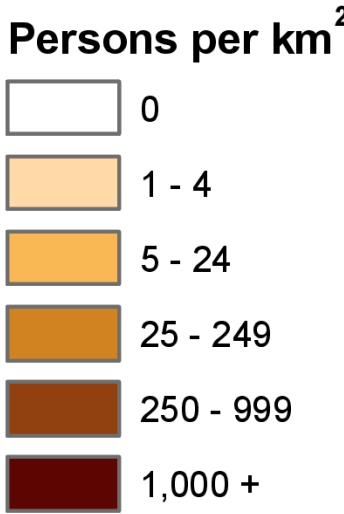


Copyright 2005. The Trustees of Columbia University in the City of New York.
Source: Center for International Earth Science Information Network (CIESIN),
Columbia University; and Centro Internacional de Agricultura Tropical (CIAT).
Gridded Population of the World (GPW), Version 3. Palisades, NY: CIESIN,
Columbia University. Available at <http://sedac.ciesin.columbia.edu/gpw>.

NOTE: National boundaries are derived from the population grids and thus
may appear coarse.



Gridded Population of the World



Copyright 2005. The Trustees of Columbia University in the City of New York.
Source: Center for International Earth Science Information Network (CIESIN),
Columbia University; and Centro Internacional de Agricultura Tropical (CIAT),
Gridded Population of the World (GPW), Version 3. Palisades, NY:
CIESIN, Columbia University. Available at: <http://sedac.ciesin.columbia.edu/gpw>.

NOTE: National boundaries are derived from the population grids and thus may appear coarse.



This document is licensed under a
Creative Commons 3.0 Attribution License
<http://creativecommons.org/licenses/by/3.0/>

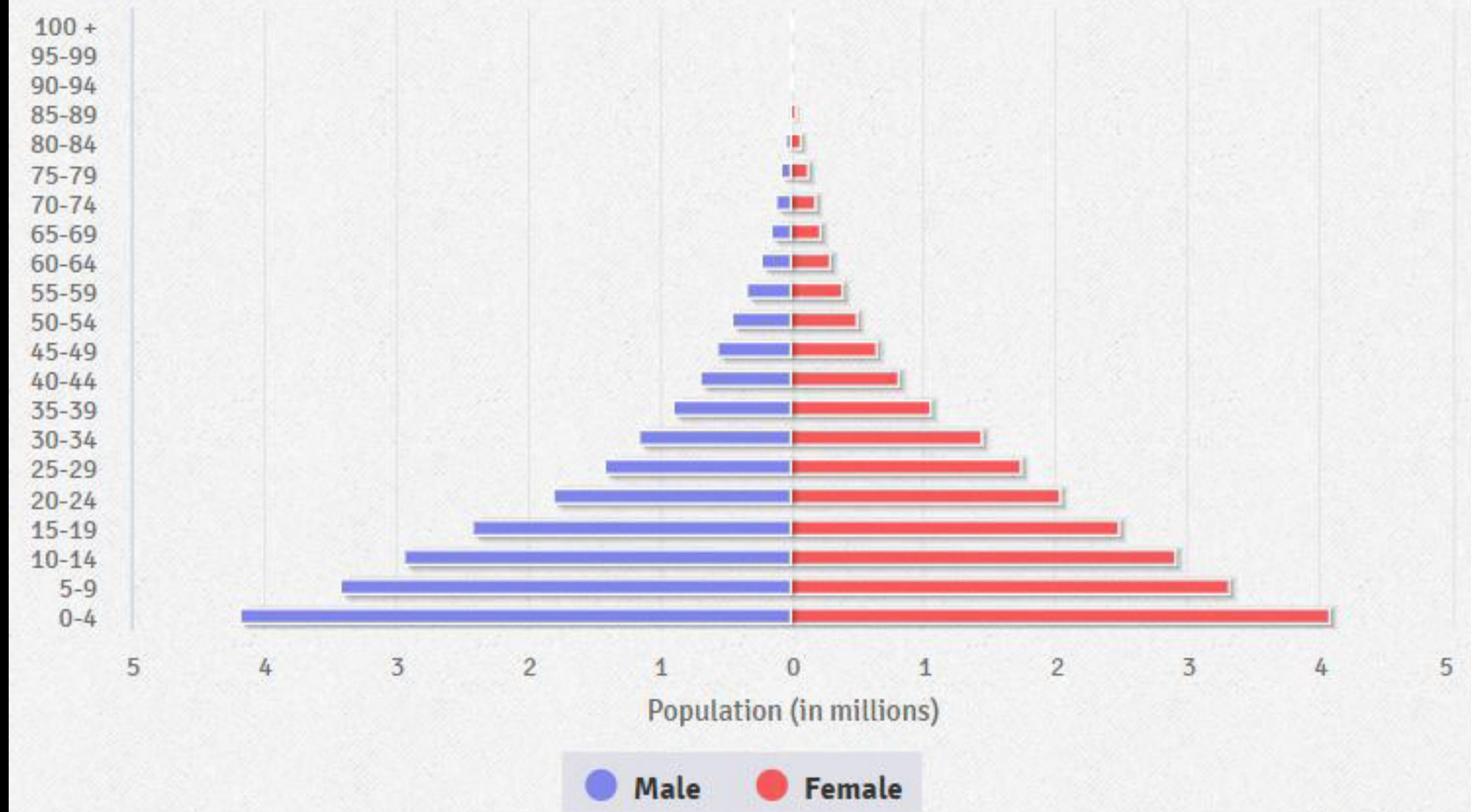
Population Density of Australian Capital Territory

ACT’s population density is 151.49 people per kilometer, which is ranking the most populated state in Australia. ACT’s population density is almost 7 times of Victoria due to her smallest population but also smallest area in Australia.

Position	State	Population Density
1	Australian Capital Territory	151.49
2	Victoria	23.54
3	New South Wales	8.64
4	Tasmania	7.24
5	Queensland	2.50
6	South Australia	1.62
7	Western Australia	0.89
8	Northern Territory	0.16

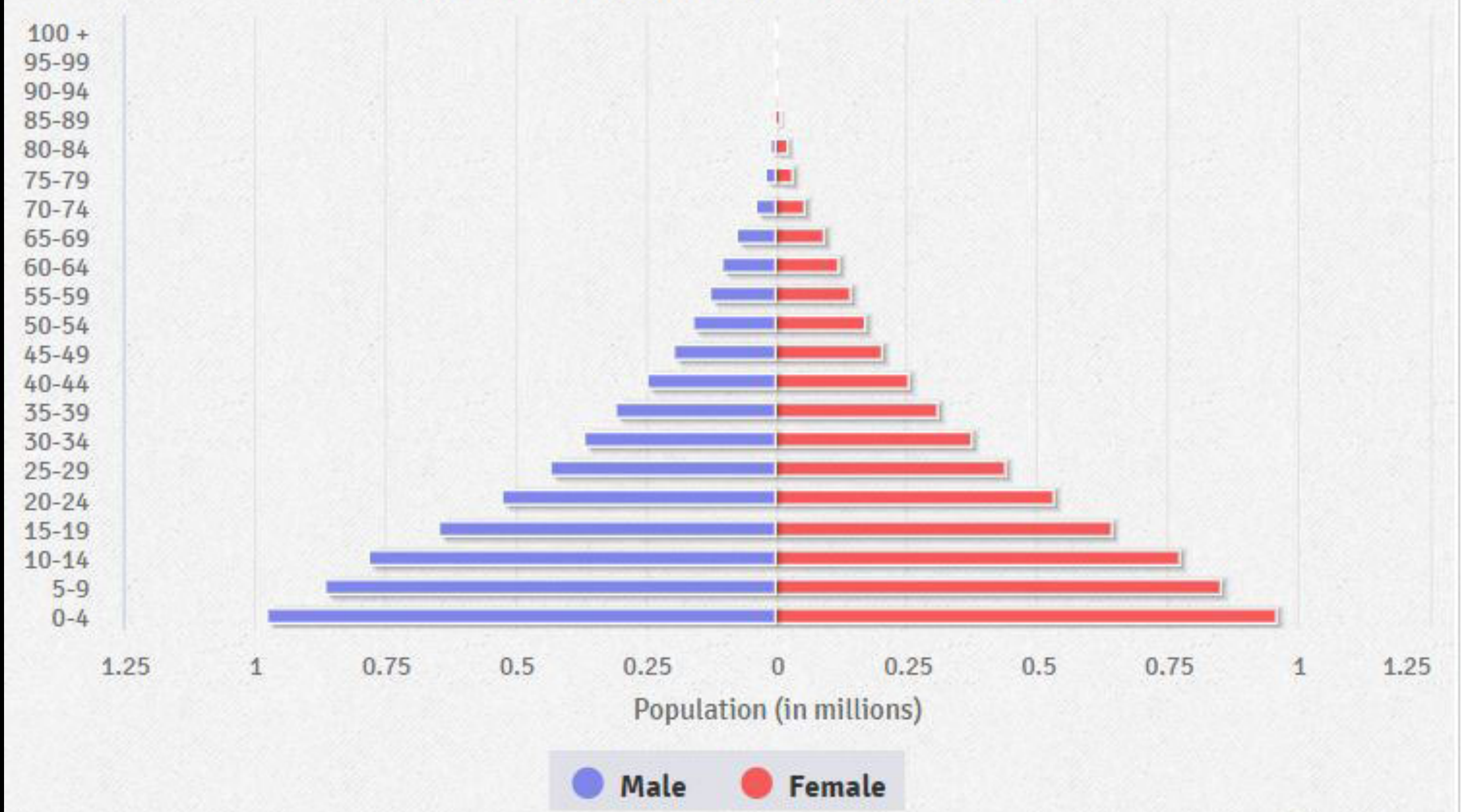
Source : <http://www.population.net.au/population-of-australian-capital-territory/>

Uganda - 2020



Source <https://www.cia.gov/library/publications/the-world-factbook/geos/ug.html>

Burundi - 2020



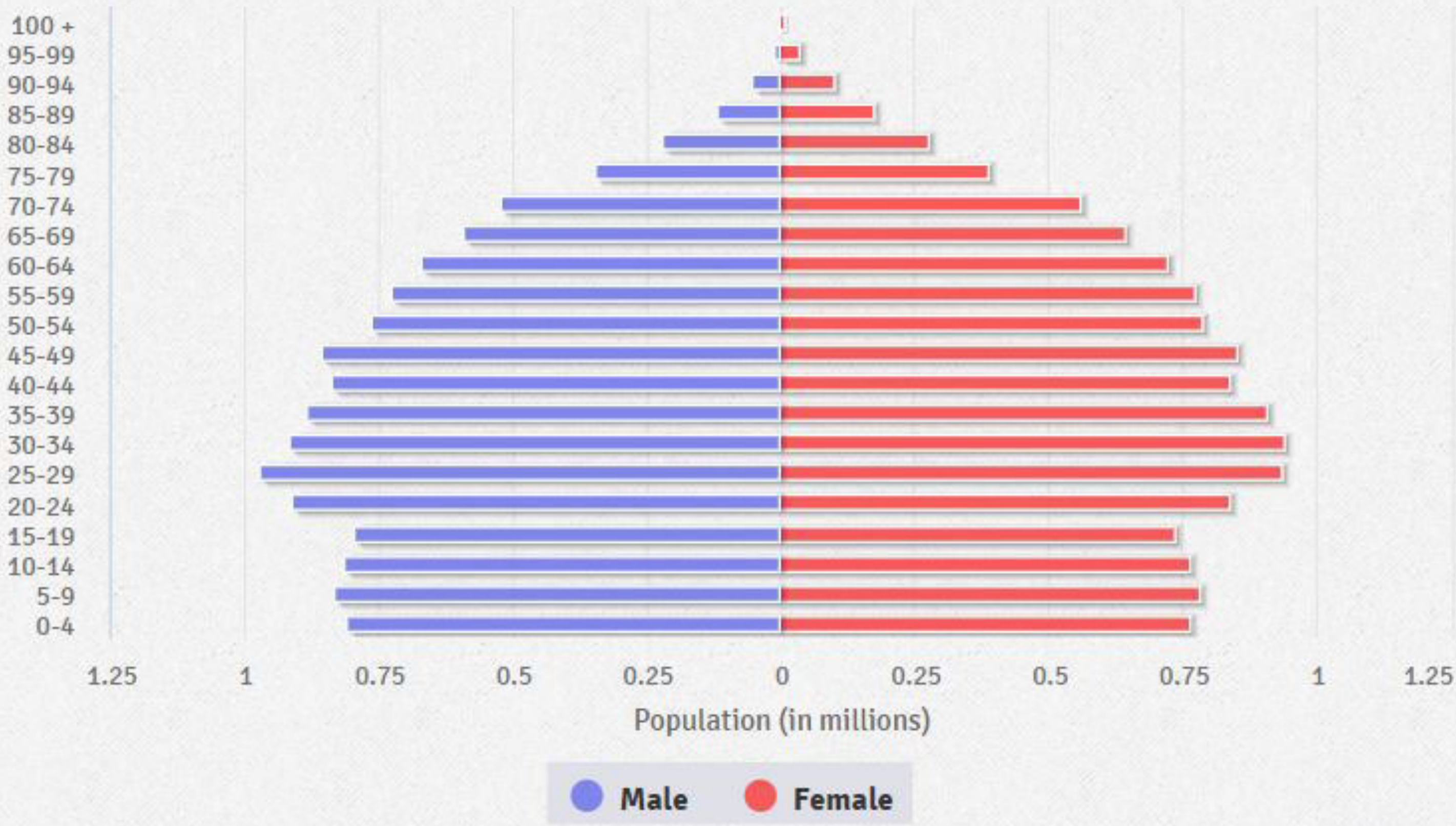
Source: <https://www.cia.gov/library/publications/the-world-factbook/geos/by.html>

Venezuela - 2020



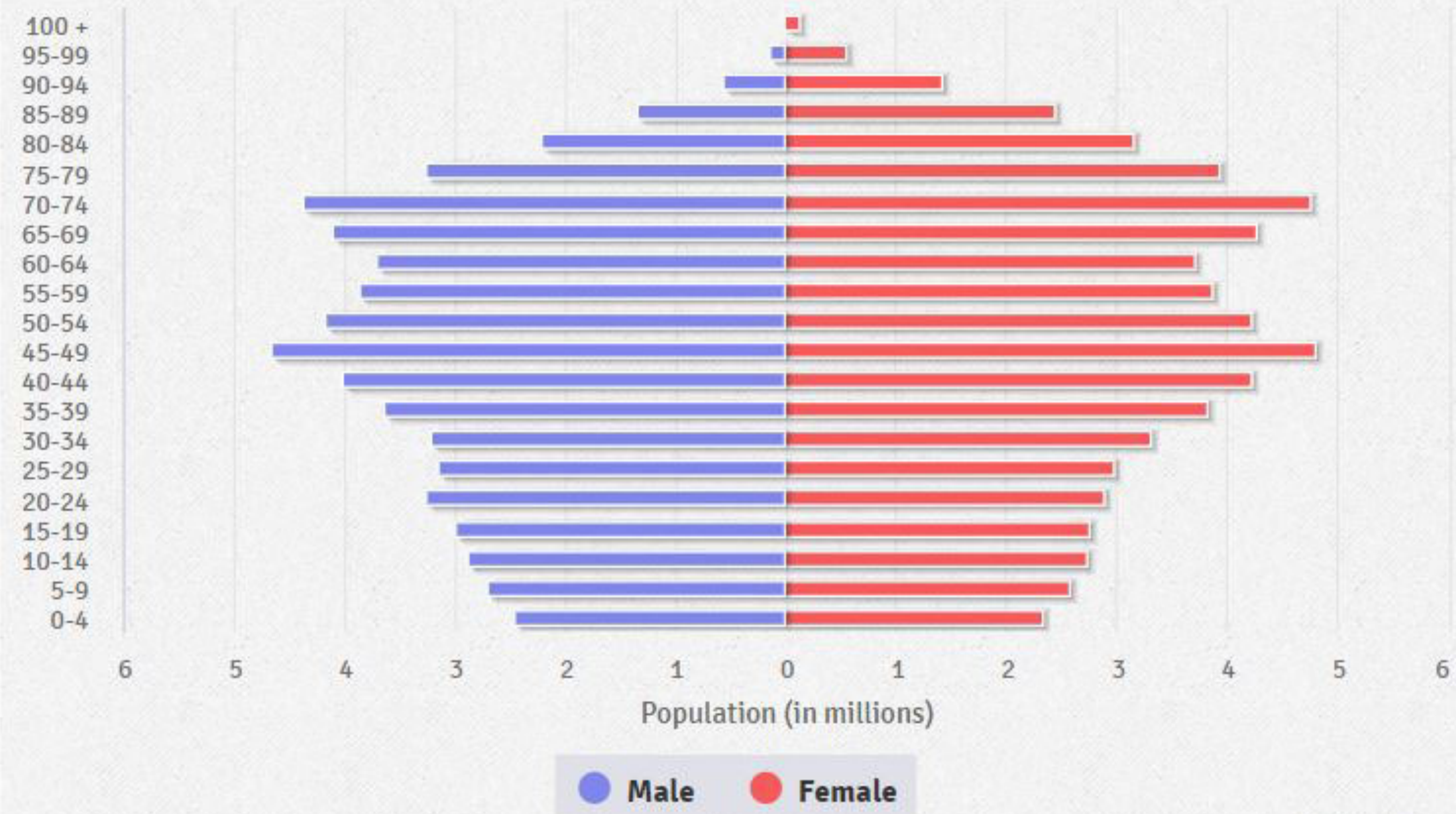
Source:<https://www.cia.gov/library/publications/the-world-factbook/geos/ve.html>

Australia - 2020



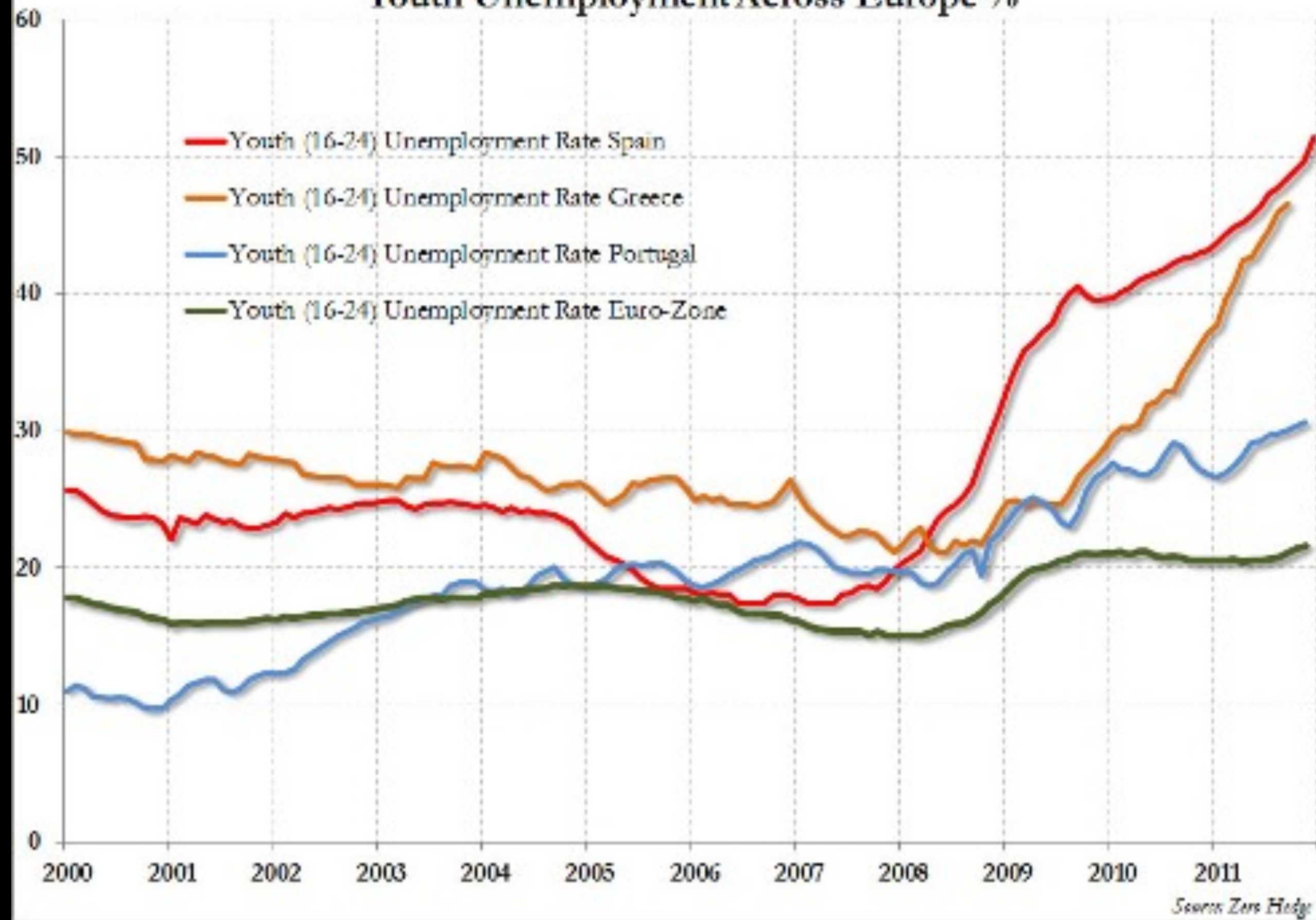
Source:<https://www.cia.gov/library/publications/the-world-factbook/geos/as.html>

Japan - 2020

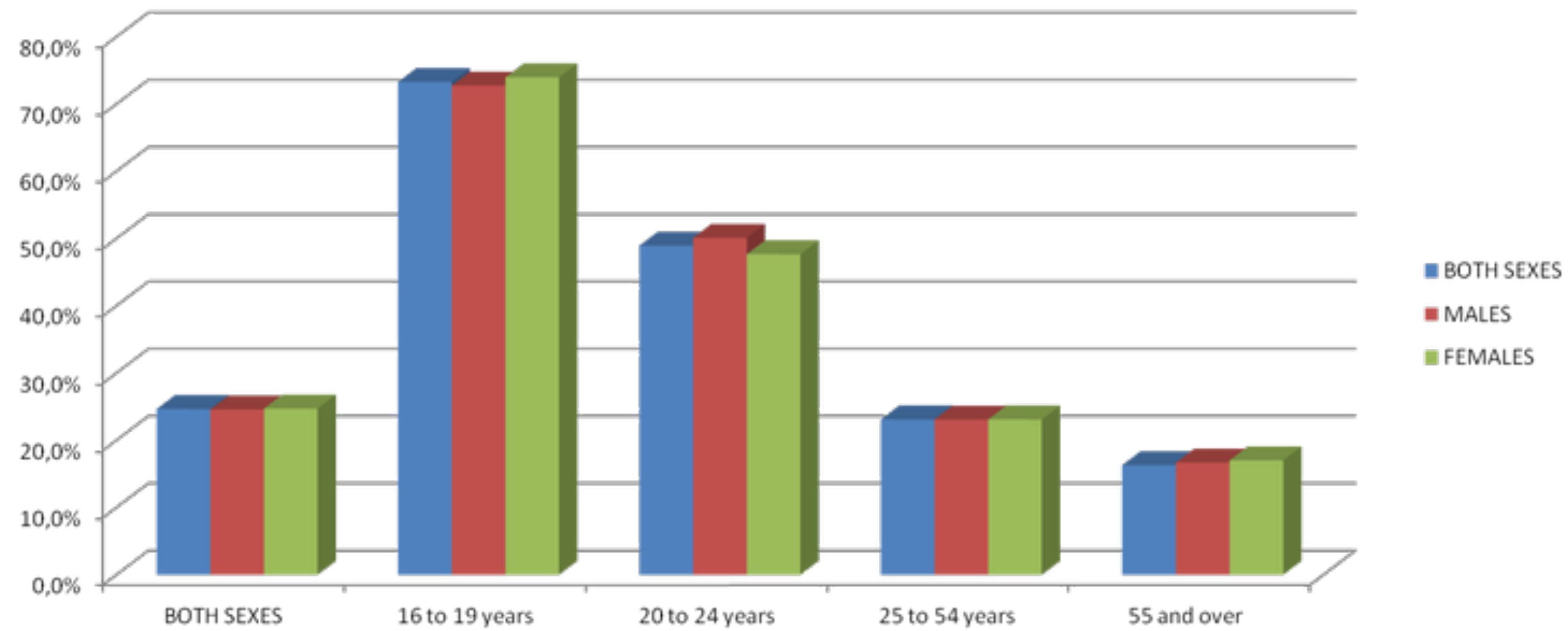


Source: <https://www.cia.gov/library/publications/the-world-factbook/geos/ja.html>

Youth Unemployment Across Europe %



Spain, 2012 — Unemployment rate by gender and age

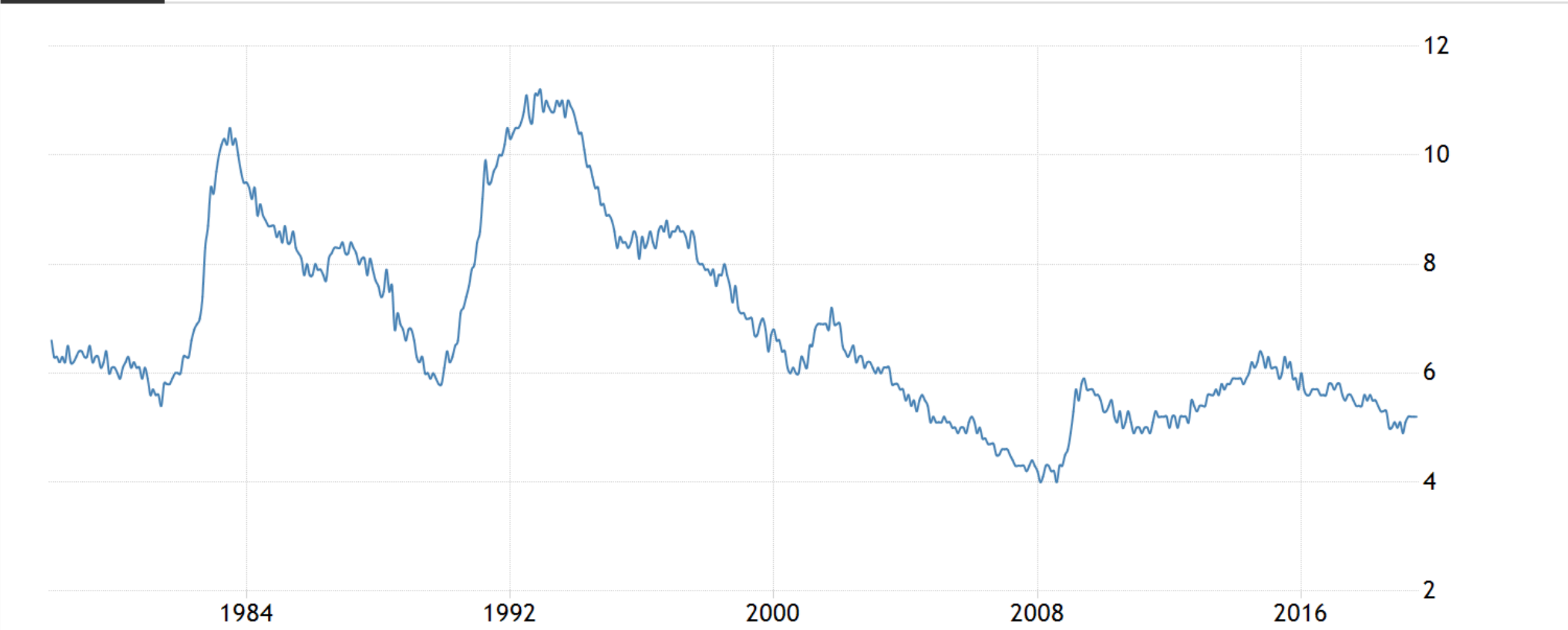


Australia Unemployment Rate

Summary Calendar Forecast Download ▾ Alerts

Australia's seasonally adjusted unemployment rate stood at 5.2 percent in July 2019, unchanged from the previous month and in line market expectations. The economy added 41,100 jobs while the number of unemployed rose by 800. Unemployment Rate in Australia averaged 6.83 percent from 1978 until 2019, reaching an all time high of 11.20 percent in December of 1992 and a record low of 4 percent in February of 2008.

Historical Data API



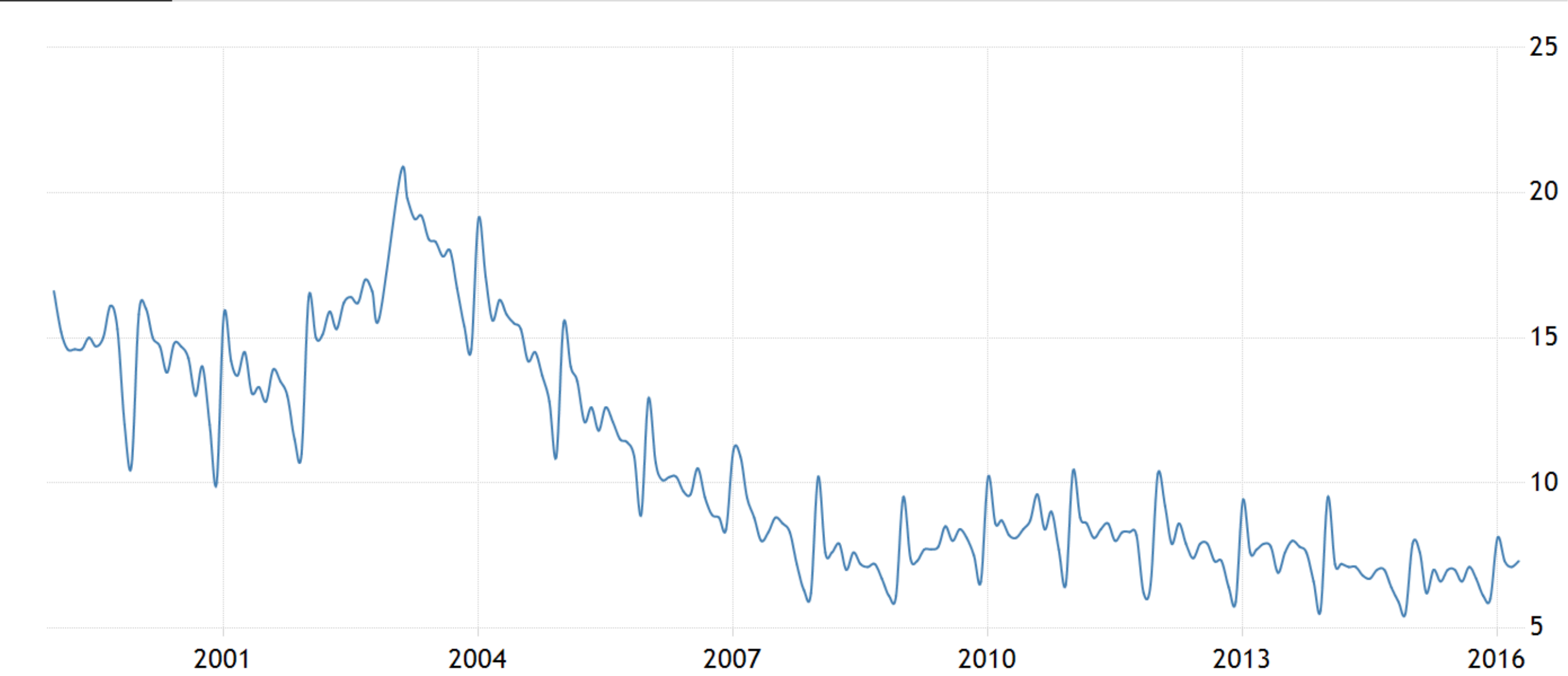
SOURCE: TRADINGECONOMICS.COM | AUSTRALIAN BUREAU OF STATISTICS

Venezuela Unemployment Rate

SummaryForecastDownload ▾Alerts

Unemployment Rate in Venezuela increased to 7.30 percent in April from 7.10 percent in March of 2016. Unemployment Rate in Venezuela averaged 10.62 percent from 1999 until 2016, reaching an all time high of 20.70 percent in February of 2003 and a record low of 5.50 percent in December of 2014.

HistoricalDataAPI



SOURCE: TRADINGECONOMICS.COM | NATIONAL INSTITUTE OF STATISTICS, VENEZUELA

Greece Unemployment Rate

Summary Calendar Forecast Download ▾ Alerts

The seasonally adjusted unemployment rate in Greece edged down to 17.2 percent in May 2019 from a downwardly revised 17.4 percent in the prior month and compared with 19.4 percent in May of 2018. It was the lowest jobless rate since May of 2011. Unemployment Rate in Greece averaged 16.26 percent from 1998 until 2019, reaching an all time high of 27.80 percent in July of 2013 and a record low of 7.30 percent in May of 2008.

Historical Data API





“[T]he power of population is indefinitely greater than the power in the earth to produce subsistence for man.”

Thomas Malthus 1798 “An Essay on the Principle of Population” (Chapter 1)

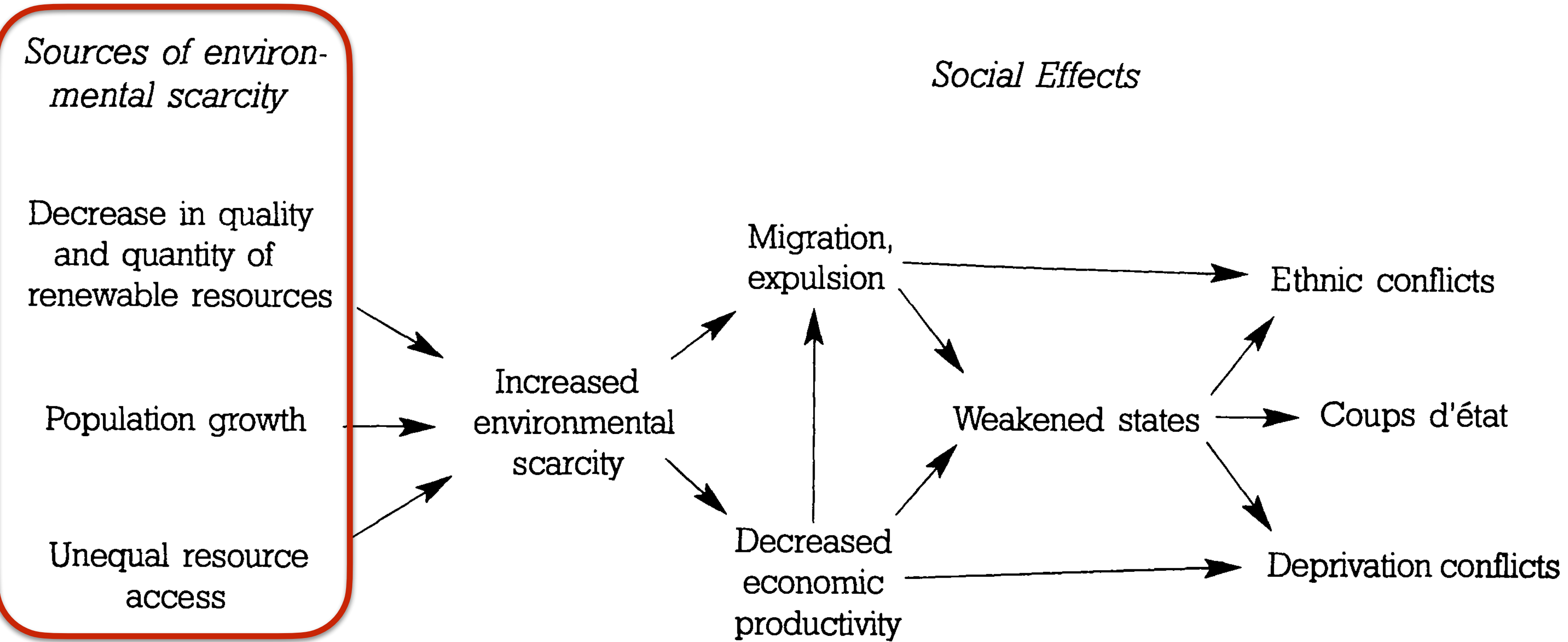
Amartya Sen



“No famine has ever taken place in the history of the world in a functioning democracy.”

Development as Freedom (1999:152)

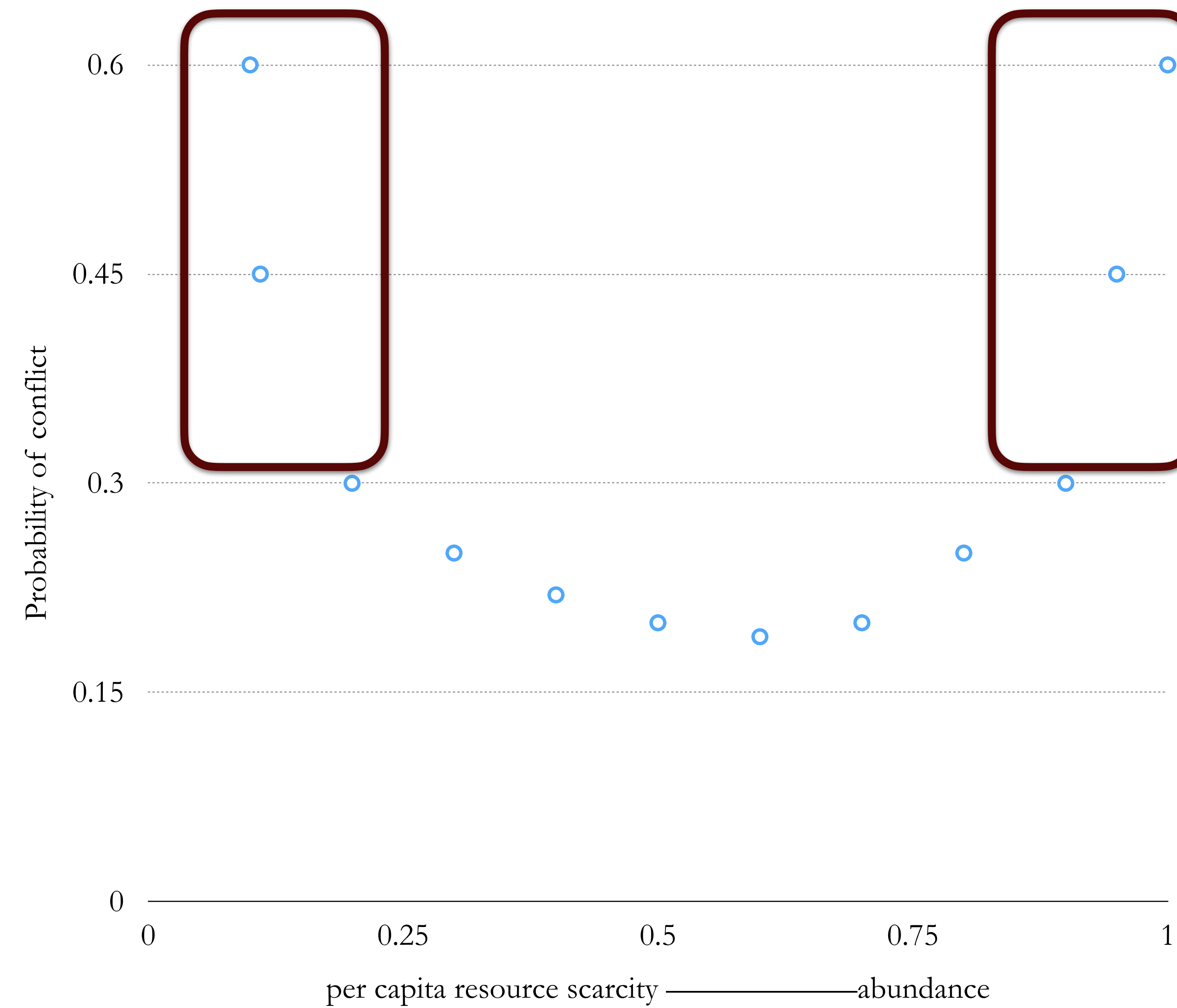
Figure 2. Some Sources and Consequences of Environmental Scarcity.



How can population dynamics affect resource scarcity and conflict?

- **Low population density** can encourage relative resource abundance, which can have a mixed effect on conflict.
- **High resource abundance** can lead to relative resource scarcity.
- Certain **distributional characteristics** of populations can affect resource scarcity and conflict.
- Populations can affect **conflict dynamics**.

Population, resource scarcity, and conflict



Revolution and Rebellion in the Early Modern World

Population Change and State Breakdown in England,
France, Turkey, and China, 1600-1850

25th Anniversary Edition



Jack A. Goldstone

ROUTLEDGE

Goldstone (2016: 459) suggests that state breakdowns in Europe, China, and Middle East from 1500-1850 came from a single process.

Population growth led to changes in prices, shifting resources, and increased social demands on relatively inflexible economic and political structures.

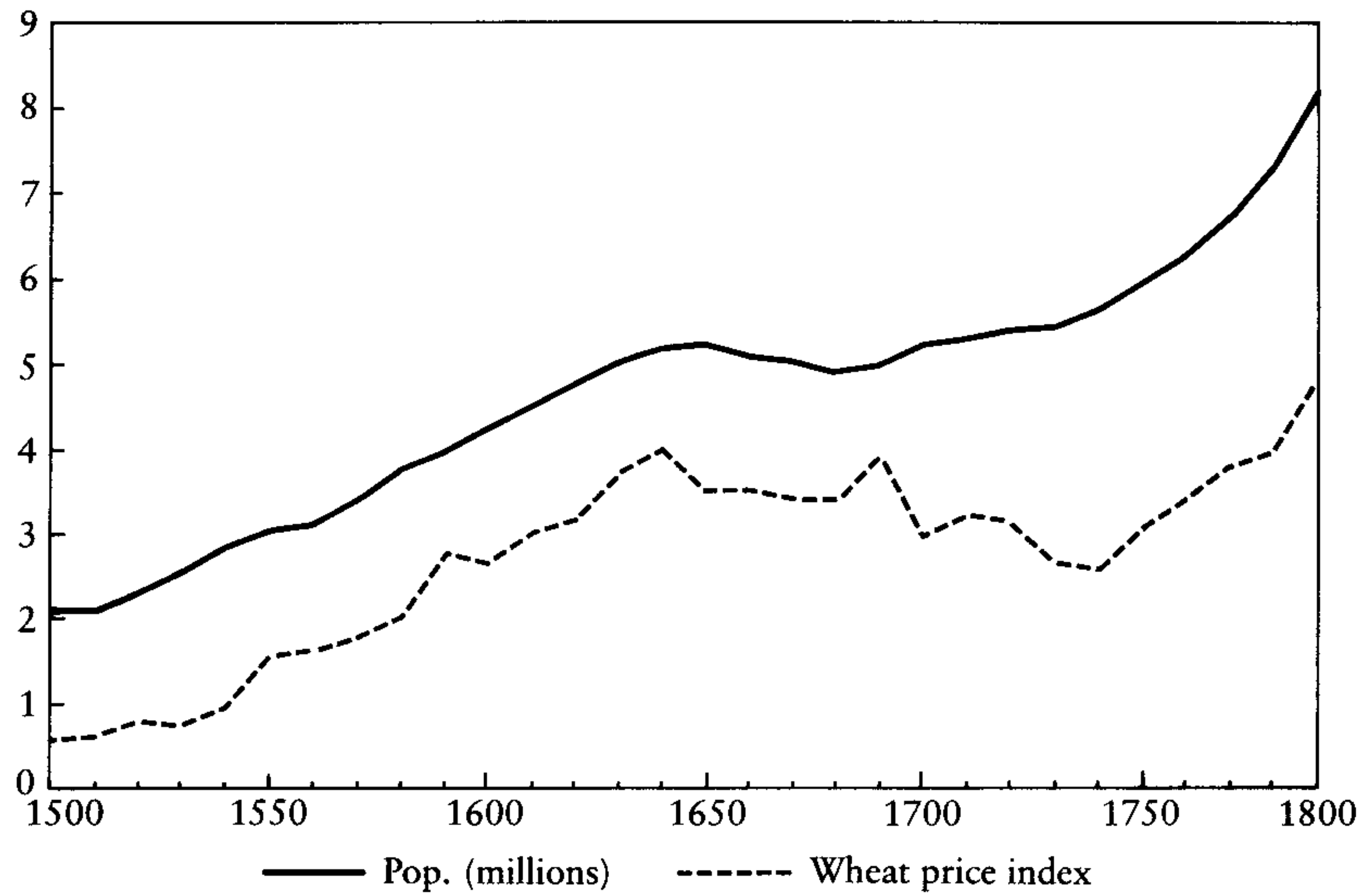


Figure 1. English population and prices, 1500–1800

Note: Wheat prices are shown as an index of decade-average prices, adjusted so that prices in 1641–1650=4.0.



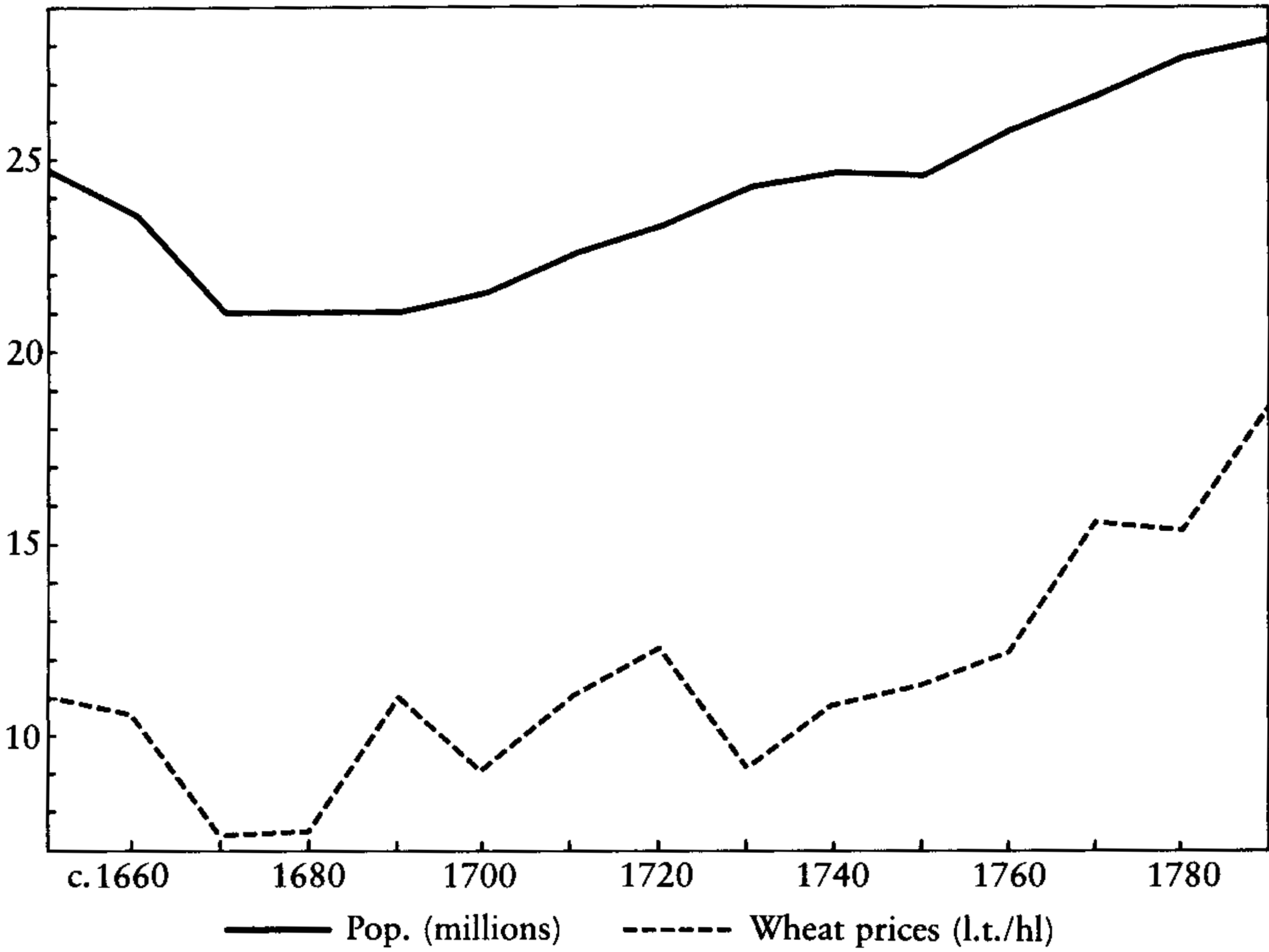


Figure 6. French population and prices, 1650–1790

Revolution and Rebellion
in the Early Modern World

Population Change and State Breakdown in England,
France, Turkey, and China, 1600-1850
25th Anniversary Edition

Jack A. Goldstone



Figure 15. Chinese population and prices, c. 1500–1800

Note: Population is estimated to have increased slightly in the first quarter of the seventeenth century, then fallen, as shown by the broken line (see text).



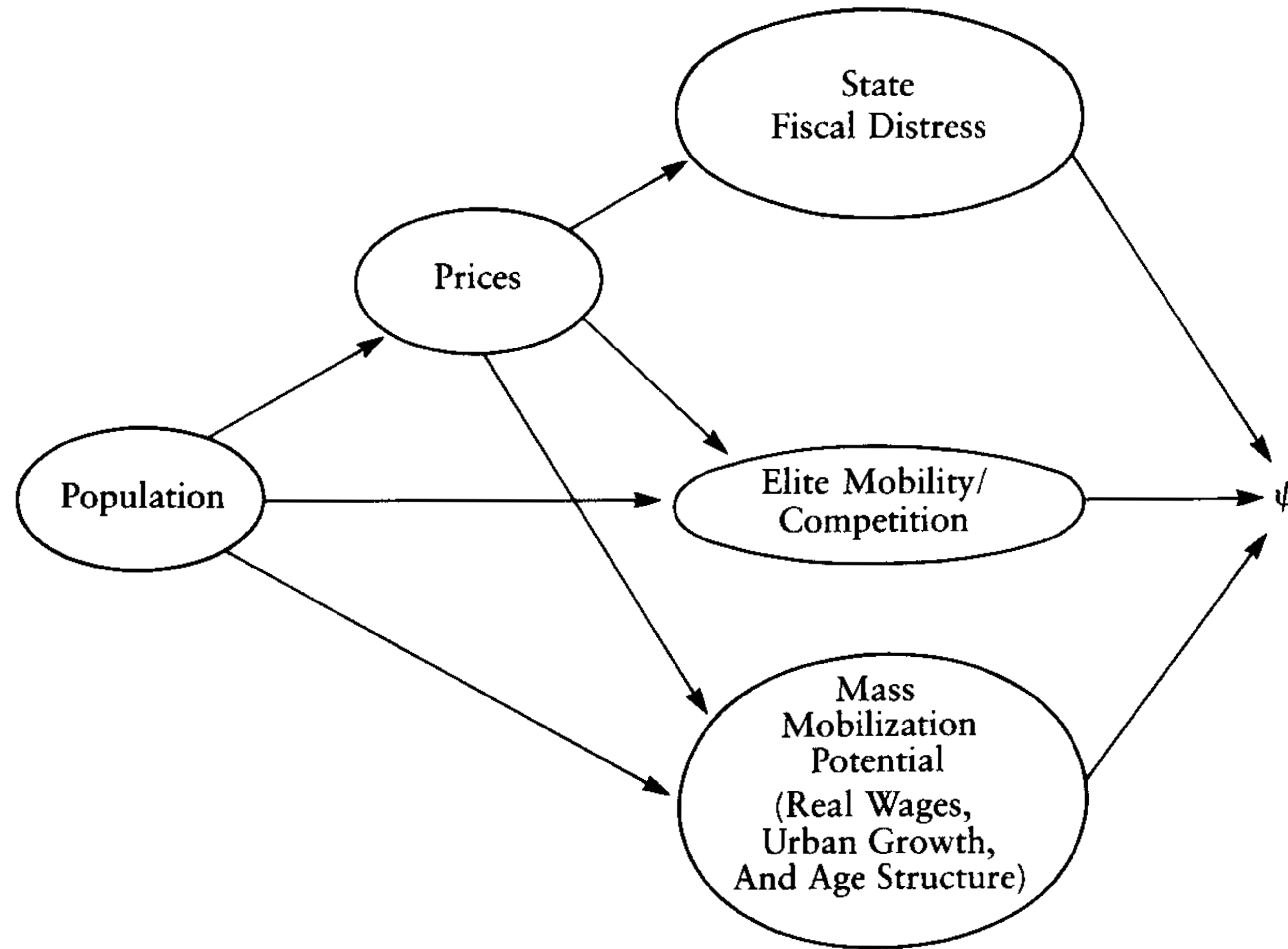


Figure 3. Political demography of early modern England: Basic Relationships



THREE

State Breakdown in Early Modern Europe: The French Revolution

Les spécialistes persistent à ignorer le rôle aggravant que la pression démographique a pu jouer dans la crise de l'ancien régime.

[The specialists persist in ignoring the aggravating role that demographic pressure may have played in the crisis of the ancien régime.]

—*Jacques Dupâquier*

Revolution and Rebellion
in the Early Modern World

Population Change and State Breakdown in England,
France, Turkey, and China, 1600-1850
25th Anniversary Edition



Jack A. Goldstone



State Breakdown in Early Modern Asia: The Ottoman Crisis and the Ming-Qing Transition

[T]he population of the Ottoman Empire increased considerably in the sixteenth century. . . . [T]his increase in population exceeded the increase in the area of cultivated land. This can be accepted as the underlying cause of social imbalance and disorder.

—*Halil Inalcik*

The harm of overpopulation is that people are forced to plant cereals on mountain tops and to reclaim sandbanks. . . . All the ancient forestry . . . has been cut down and the virgin timber land of the aboriginal regions turned into farmland. Yet there is not enough for everybody. This proves that the resources of Heaven and Earth are exhausted.

—*Wang Shiduo*



Lecture question #1

Industrialized agricultural growth has outpaced human need.

The resources of heaven and earth have not yet been exhausted.

Does this suggest that the modern world is systematically different than that Goldstone's case studies and at lower risk of demographically induced instability?

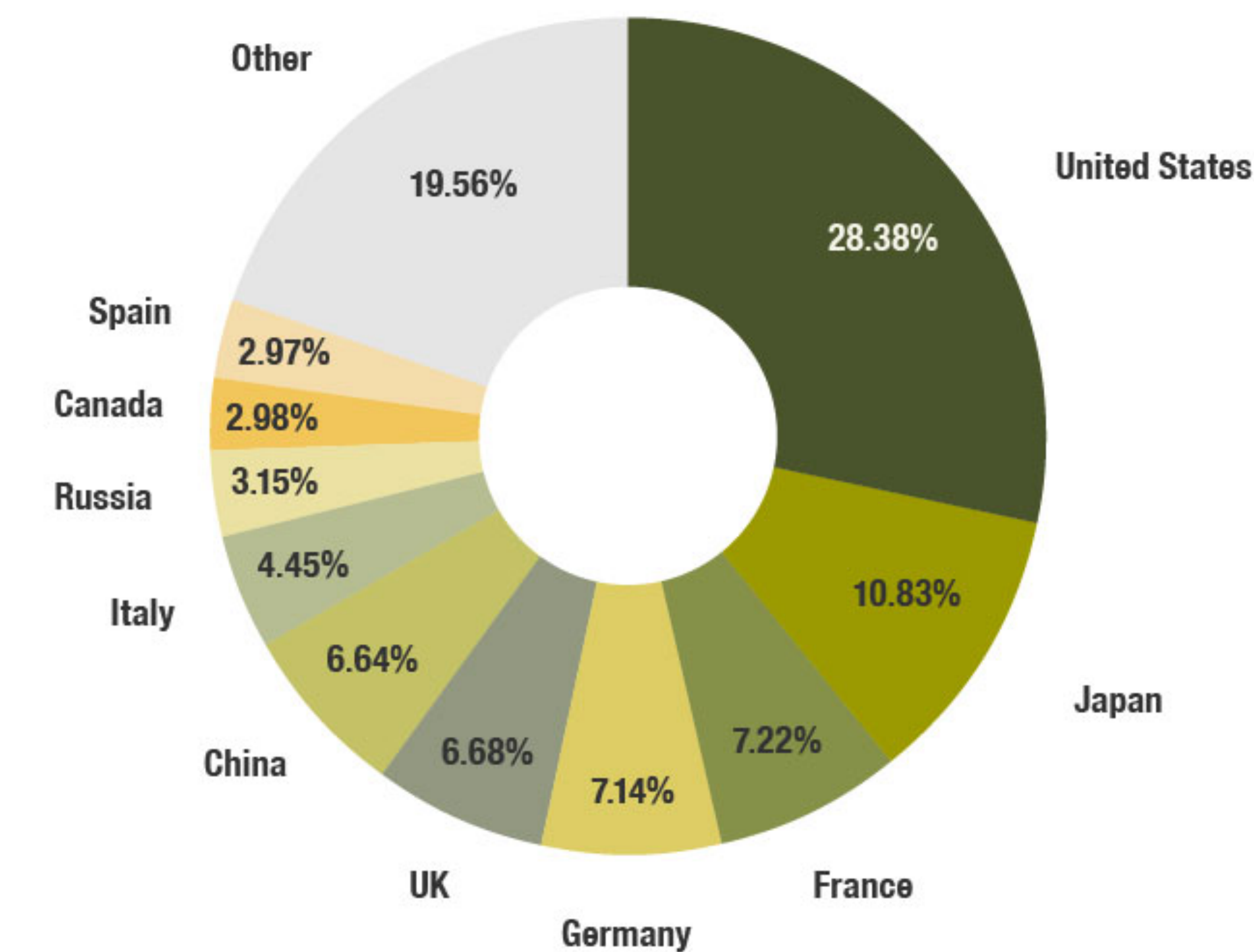
II. Environmental factors and Rwanda's 1994 genocide



Image source: <http://www.aboutrwanda.com/rwanda-climate-and-geography/>

UN PEACEKEEPING OPERATIONS IN AFRICA

TOP PROVIDERS OF ASSESSED CONTRIBUTIONS



Figures are from 2013–2015

Source: United Nations

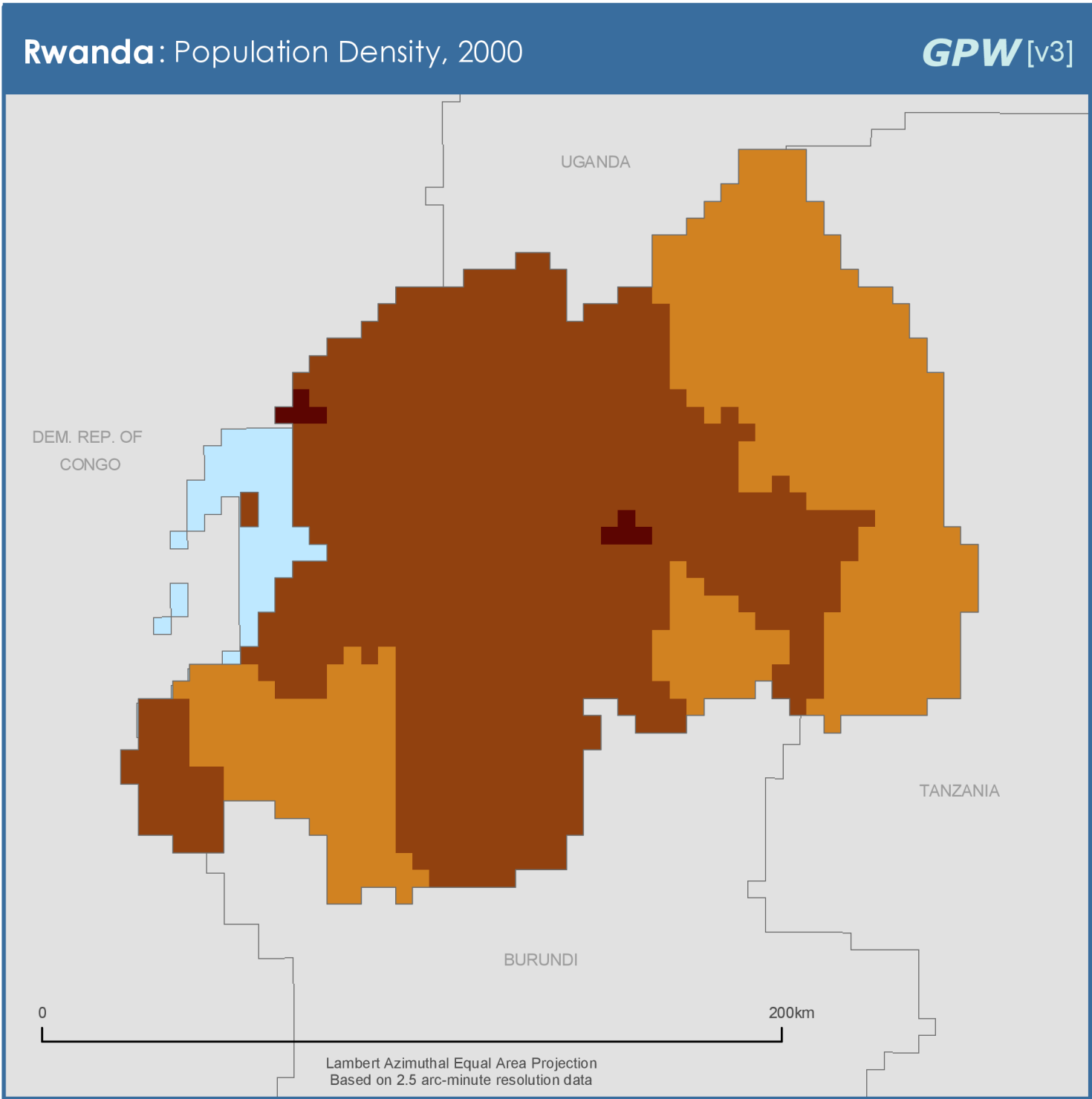
Credits: Danielle Renwick, Julia Ro

MILITARY AND POLICE CONTRIBUTING COUNTRIES

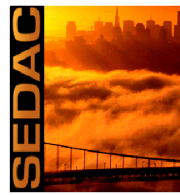
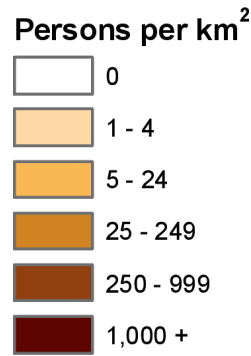
COUNTRY	UNIFORMED PERSONNEL CONTRIBUTED
Bangladesh	9,307
Pakistan	8,163
India	8,112
Ethiopia	7,864
Rwanda	5,575
Nepal	5,316
Senegal	3,570
Ghana	3,053
Nigeria	2,975
Egypt	2,937

Figures are as of April 30, 2015

Percival & Homer-Dixon (1996: 271) think “environmental factors do not provide an adequate explanation of the genocide in Rwanda.”



Gridded Population of the World



Copyright 2005. The Trustees of Columbia University in the City of New York.
Source: Center for International Earth Science Information Network (CIESIN),
Columbia University; and Centro Internacional de Agricultura Tropical (CIAT),
Gridded Population of the World (GPW), Version 3. Palisades, NY: CIESIN,
Columbia University. Available at: <http://sedac.ciesin.columbia.edu/gpw>.

*NOTE: National boundaries are derived from the population grids and thus
may appear coarse.*



This document is licensed under a
Creative Commons 3.0 Attribution License
<http://creativecommons.org/licenses/by/3.0/>

Percival & Homer-Dixon (1996) argue that demand and supply scarcity existed, but it was **not structural** as incomes were rather evenly distributed (Gini=.26).

“Urban areas had few opportunities for employment, and rural-urban migration was restricted after the onset of the civil war. Migrants had little choice but to move to and settle in hillside areas.”

(Percival and Homer-Dixon 1996: 280)

Percival & Homer-Dixon (1996) hypotheses

H1: High levels of **grievance**

H2: Transition from **authoritarian rule**

H3: Manipulation of **ethnic identity**

H4: **Elite insecurity** in the context of the
Arusha Accords

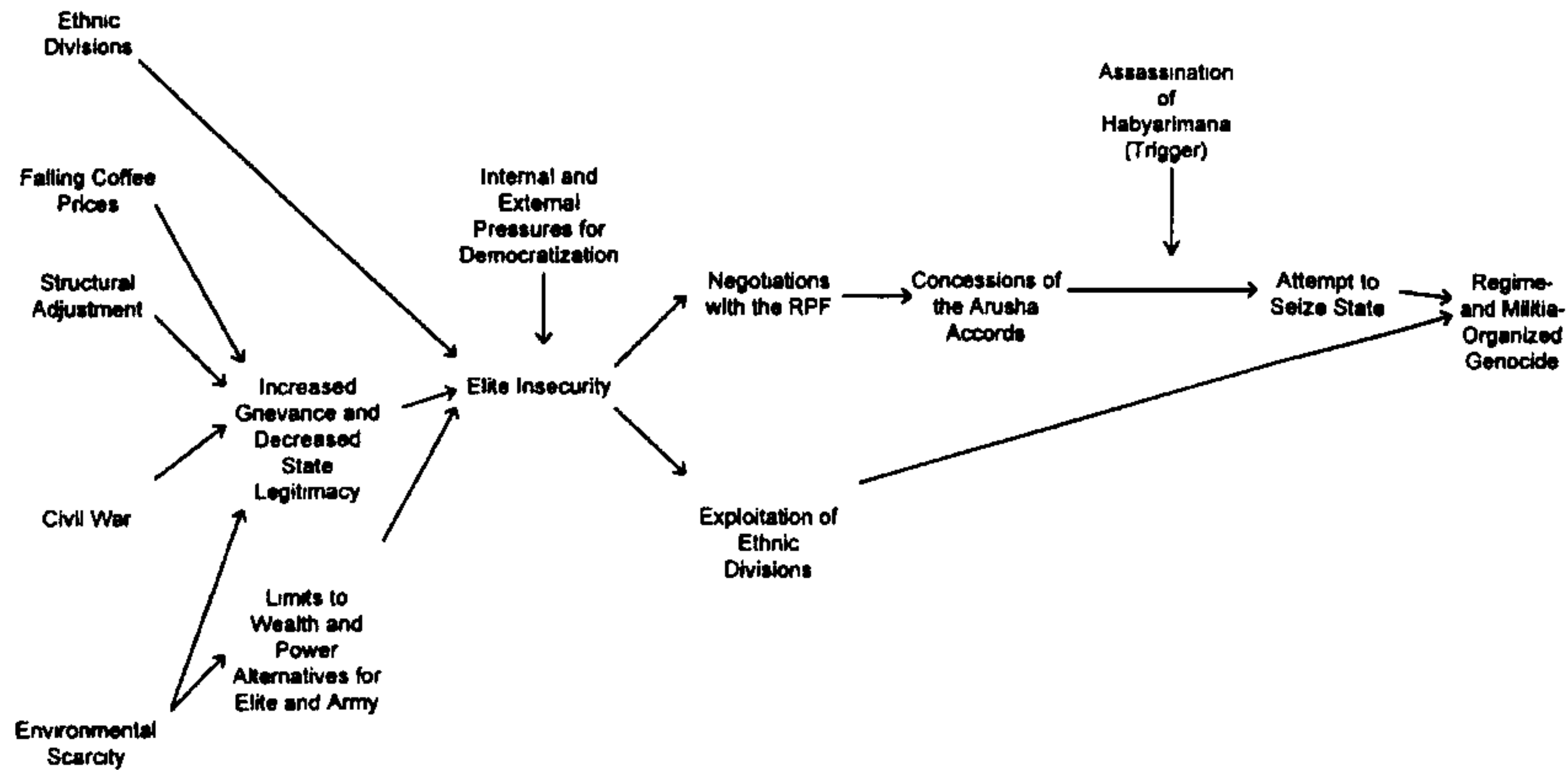


Figure 4: Elite Insecurity in the Context of the Arusha Accords

Source: Percival & Homer-Dixon 1996: 286

Population leads to resource scarcity

Demand-induced scarcity resulting
from population growth

Supply-induced scarcity from
degradation of resources

Structural scarcity because of
unequal distribution



How multilateral development assistance triggered the conflict in Rwanda

REGINE ANDERSEN

ABSTRACT *Previous to the genocide in Rwanda in 1994, multilateral development agencies promoted three different strategies in the country. These were economic structural adjustment programmes, the multiparty democratisation process and the peace negotiation and implementation process (in co-operation with the OAU). In this article, I propose that these three strategies had contradictory and mutually negating effects on each other, and that they in combination contributed to a weakening of the regime. The conclusion is that these strategies—despite the best intentions—triggered the conflict. The article ends with a discussion of lessons to learn with regard to the role of multilateral development agencies in crisis prevention.*

In April 1994 a conflict evolved into some of the most brutal massacres the world has ever seen. This occurred despite the presence of multilateral development aid organisations and banks, bilateral aid agencies and international NGOs, and after massive efforts at peace negotiation. Many researchers have analysed the events in order to find out how this could have happened and why the peace efforts failed, but so far only a few have focused on the role of development aid organisations during the period leading up to the outbreak of conflict. The most comprehensive contribution on this issue has been delivered by Uvin (1998), who highlighted the linkages of aid to the underlying structural dimensions of conflict in Rwandan society, and documented how aid organisations failed to take action as the human rights situation rapidly deteriorated in the years up to 1994. In addition to Uvin, Scherrer (1997) showed how development aid was used to finance the preparations for genocide in the same period. Among others, Klinghoffer (1998) documented how bilateral French and Belgian military aid was provided to Rwanda up to 1994 and the French even continued arming the interim government after recognising that genocide was taking place and after an embargo was imposed by the UN Security Council. From another angle, Chossudovsky (1996) and Storey (1999), among others, examined the effects of economic structural adjustment programmes on the conflict in Rwanda, in different ways concluding that the programmes indirectly influenced the conflict situation. Scherrer (1999) showed how the externally induced democratisation efforts of the early 1990s, under conditions of permanent emergency, led to the

Regine Andersen is at the Fridtjof Nansen Institute, PO Box 326, N-1326 Lysaker, Norway.

Andersen's (2000) focus
Structural adjustment programs
Multiparty democratization
Peace negotiations and implementation

III. Youth bulges and conflict



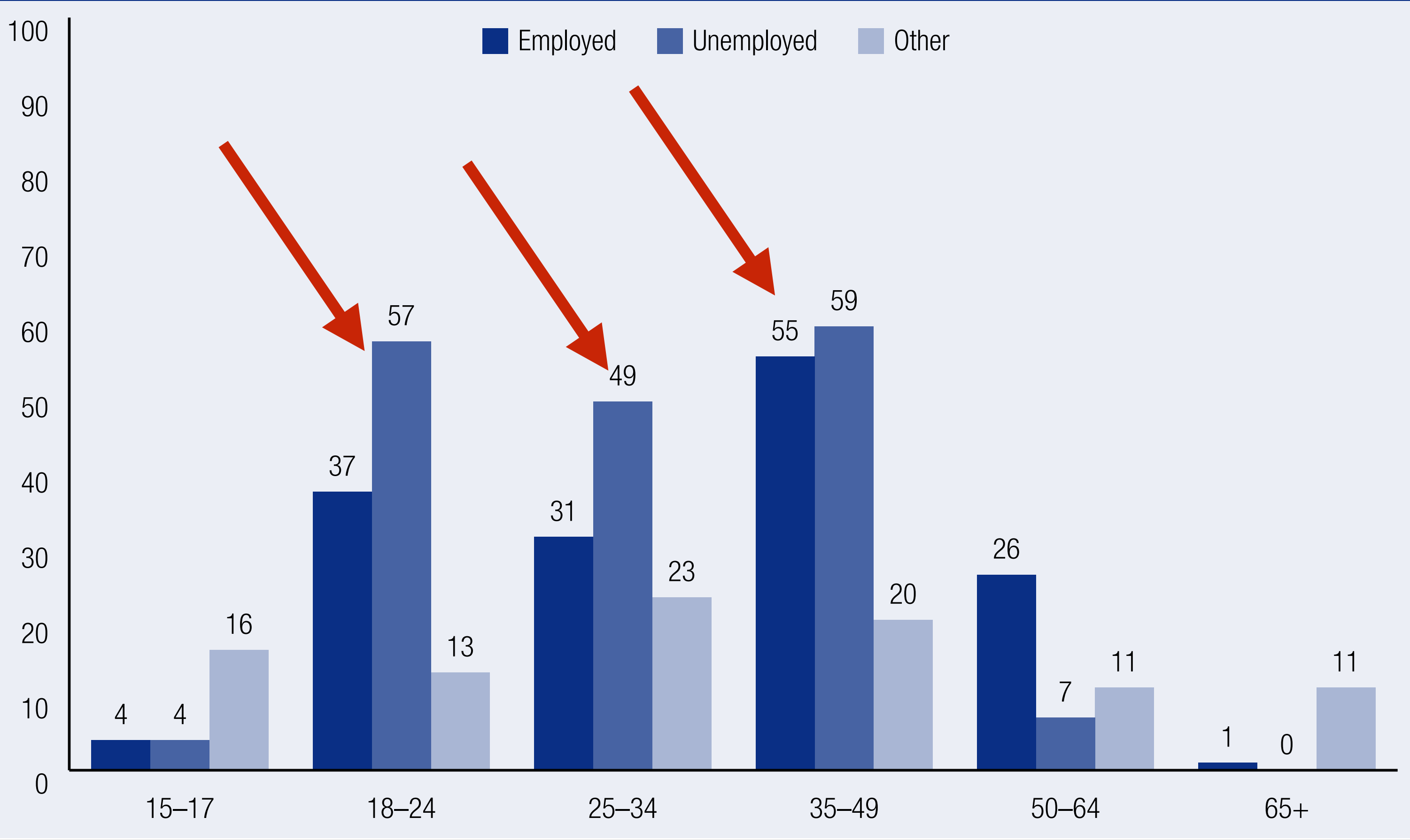




Table 15 Homicide offender age in years by sex, 2008–10 ^a						
Years of age	Male offenders		Female offenders		All offenders ^b	
	n	%	n	%	n	%
Under 1	0	0	0	0	0	0
1–9	0	0	0	0	0	0
10–14	6	1	0	0	6	1
15–17	31	6	1	1	32	5
18–24	136	26	6	9	142	24
25–34	135	26	22	32	157	27
35–49	149	29	29	43	178	30
50–64	47	9	7	10	54	9
65+	12	2	3	4	15	3
Total	516		68		584	
Mean age	32.7		37.8		33.2	
Median age	29		38		30	

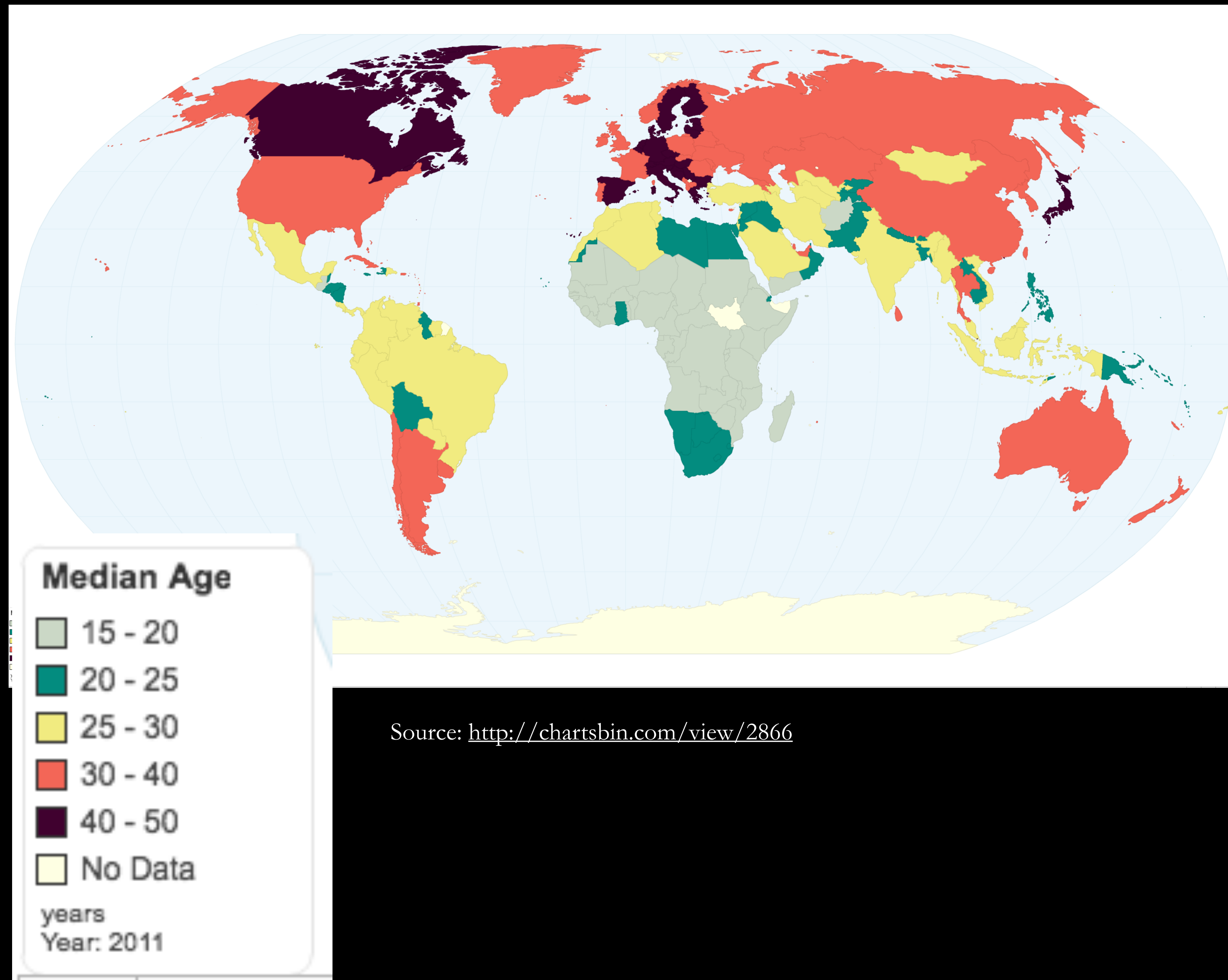
Source: Andy Chan & Jason Payne. 2013. Homicide in Australia, 2008-2010. Australian Institute of Criminology: 28.

Figure 20 Employment status of homicide offenders by age group in years, 2008–10 (%)



Source: Andy Chan & Jason Payne. 2013. Homicide in Australia, 2008-2010. Australian Institute of Criminology: 29.

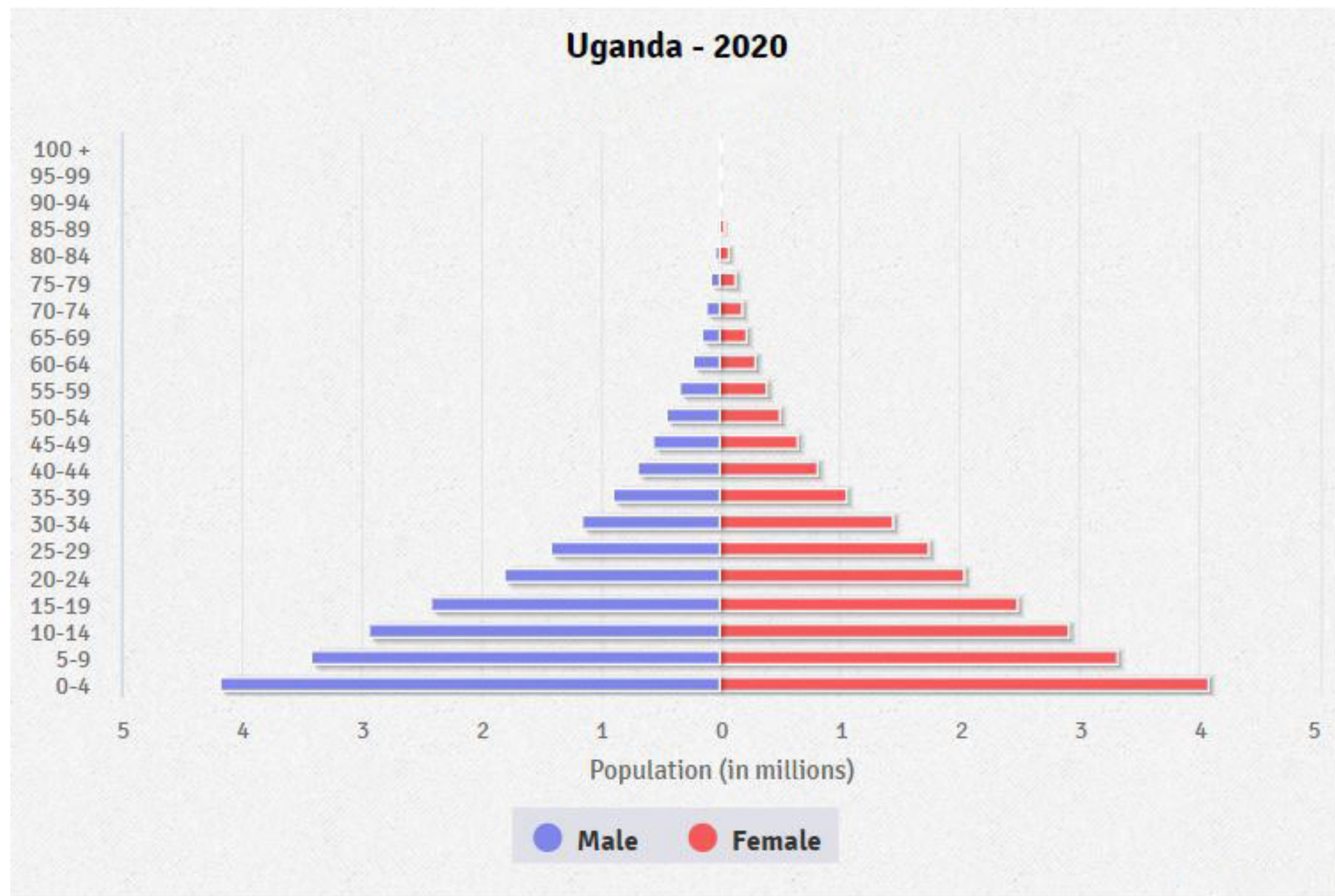
Median age, 2011



Median age, 2015

Country	Age
Uganda	15
Gaza Strip	15
Burundi	17
Rwanda	18.8
Indonesia	29.6
Vietnam	29.6
New Zealand	37.7
USA	37.8
Australia	38.4
United Kingdom	40.4
France	41.1
Netherlands	42.3
Germany	46.5
Japan	46.5

How do youth bulges lead to violence?



What is so dangerous about youth bulges?

Urdal (2006) mentions both **motive** and **opportunity** arguments but says they have same empirical implications:

- H1: Mere size (+)
- H2: Demographic dividend*bulge (-)
- H3: Economic growth*bulge (-)
- H4: Higher education*bulge (+)
- H5: Urbanisation*bulge (+)
- H6: Autocracy*bulge (+)

Homer-Dixon (1999) might suggest structural scarcity due to unequal distribution.

An aerial photograph showing a vast, sprawling urban landscape. The foreground and middle ground are filled with dense, low-rise residential buildings, likely in a developing area. The buildings are tightly packed, with some larger, more modern structures visible in the distance. The terrain appears to be hilly or uneven, with the urban sprawl following the contours of the land. The overall color palette is dominated by the earthy tones of the buildings and the green of some scattered vegetation.

IV. Urbanisation

Image source: Washington Post (https://img.washingtonpost.com/rw/2010-2019/WashingtonPost/2015/05/11/Interactivity/Images/01-Urban-Animal-Sprawling-City1431379265.jpg?env=A&utm_source=reddit.com)

Lecture question #2

Can you think of another interactive relationship that may explain youth bulges link to conflict?

Urbanisation trends

54% of the world's population lives in urban areas in 2014

- 3.9 billion in urban areas
- 3.4 billion people in rural areas

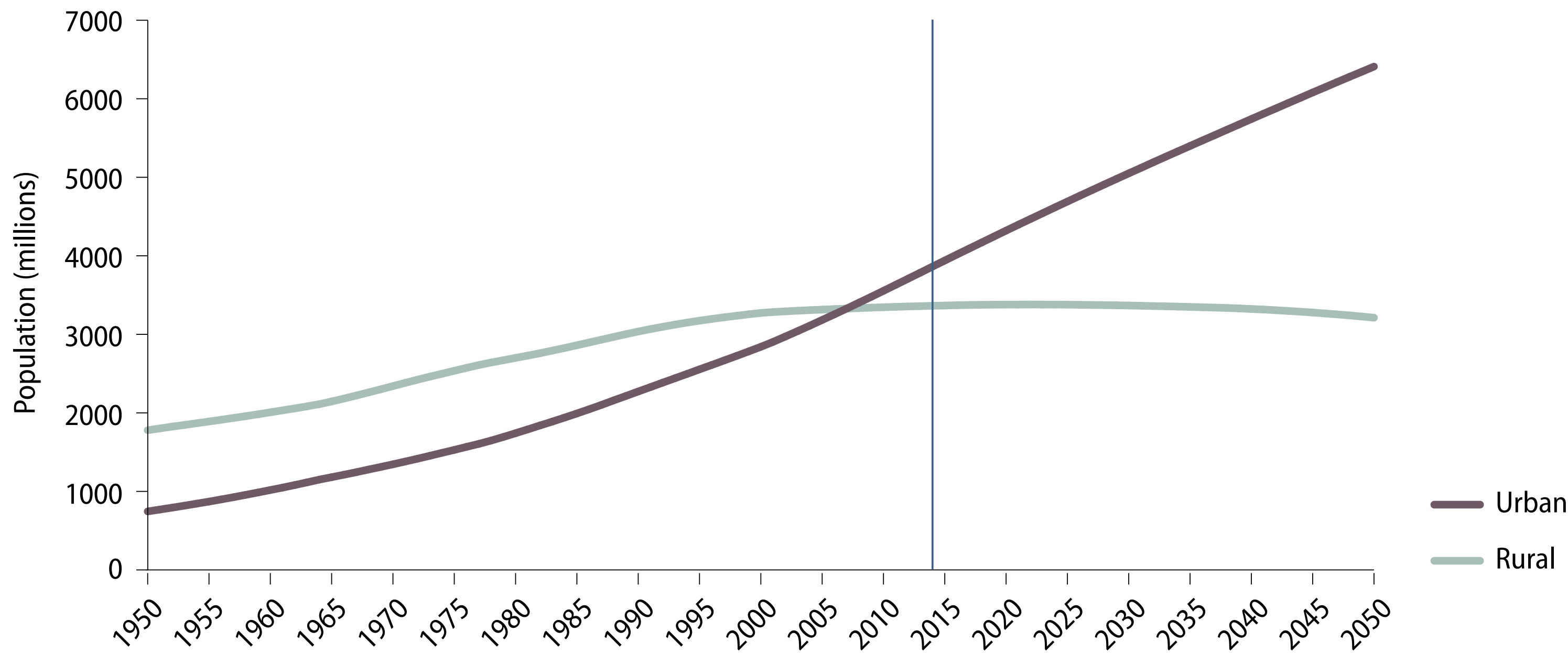
Source: United Nations. 2014. "World Urbanisation Prospects."

Regional urbanisation rates

Region	% Urban population
North America	82
Latin America & Caribbean	80
Europe	73
Asia	48
Africa	40

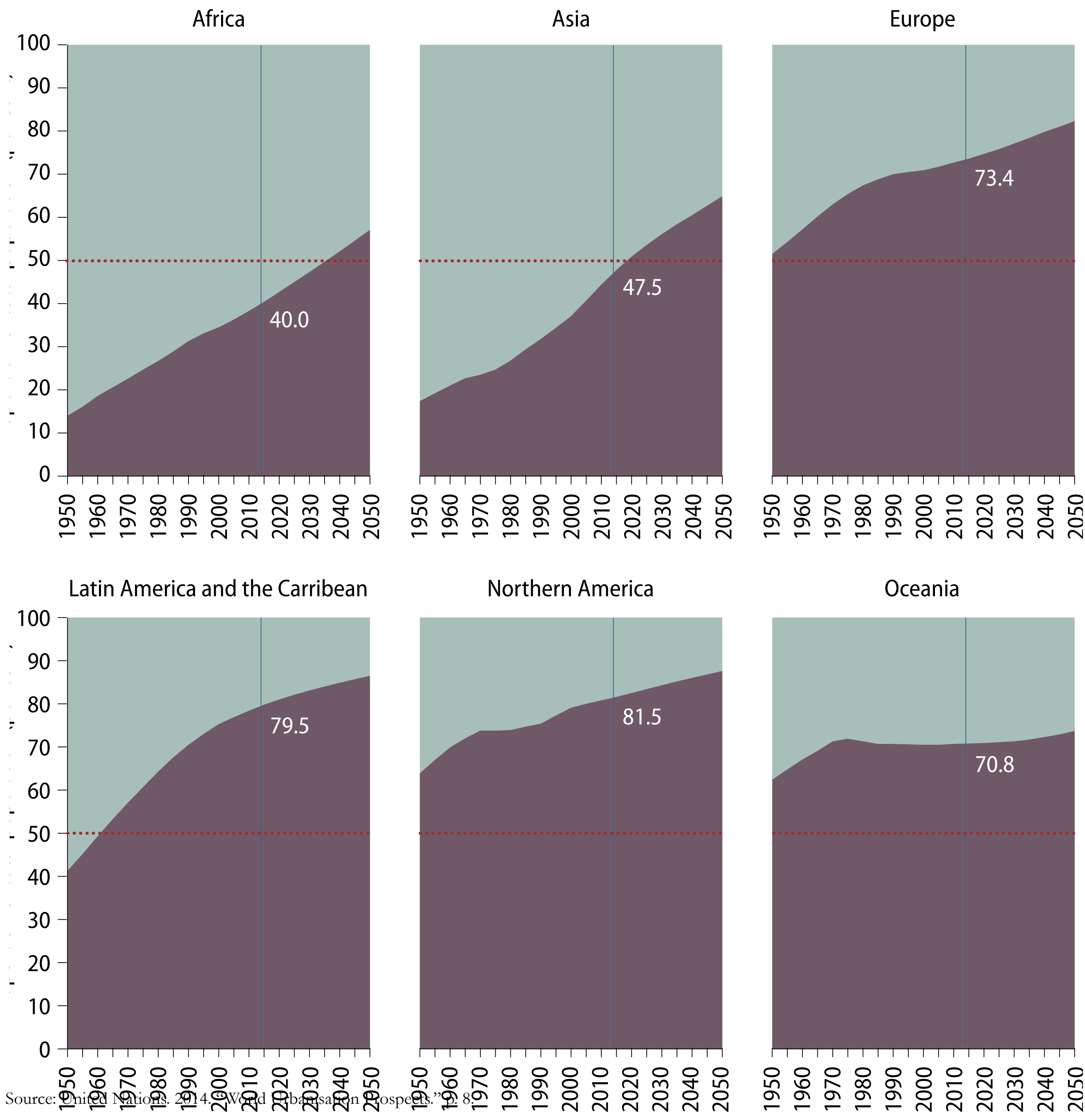
Figure 2.
Urban and rural population of the world, 1950–2050

A majority of the
world’s population
lives in urban areas



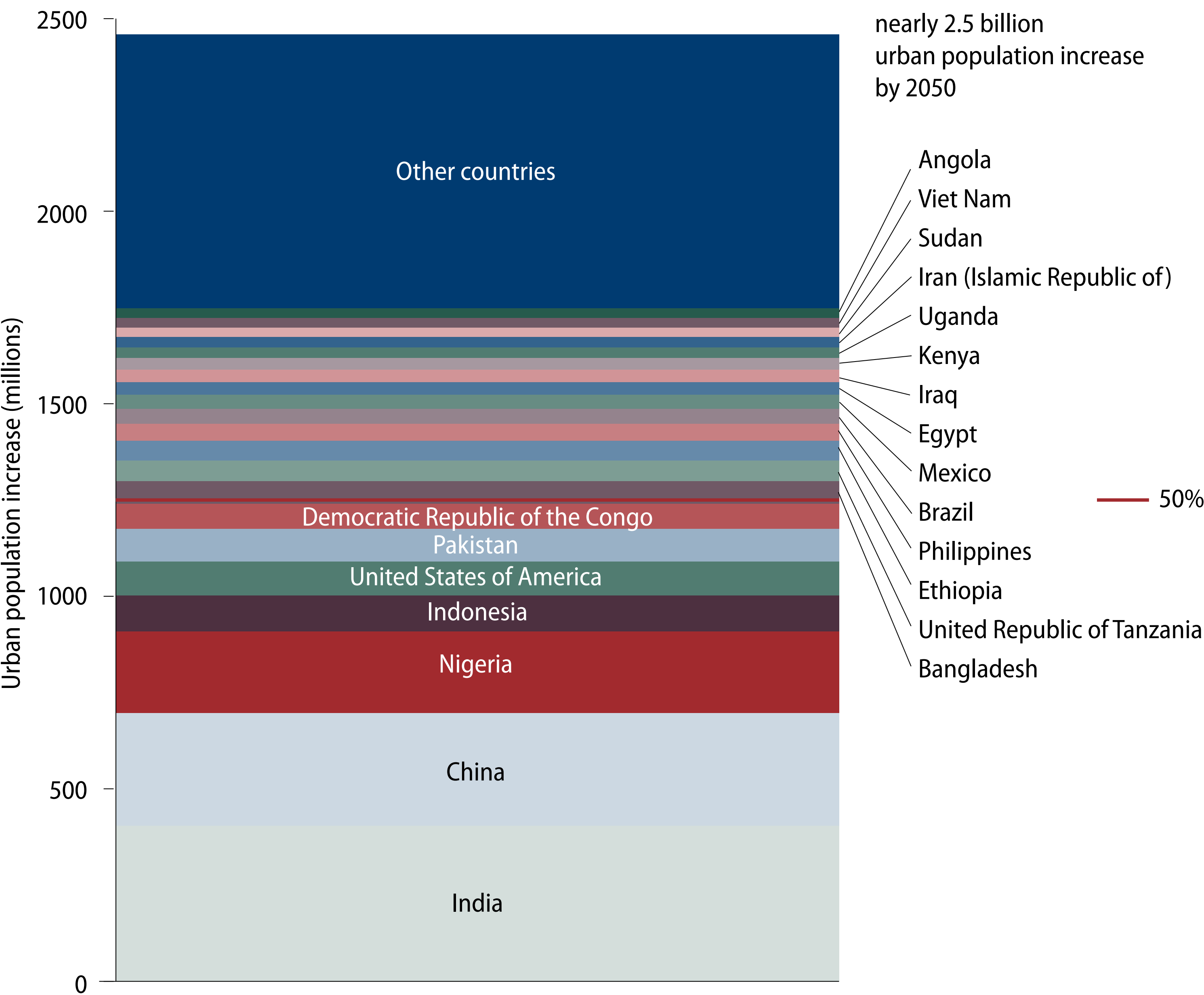
Source: United Nations. 2014. “World Urbanisation Prospects.” p. 7.

Figure 3. Urban and rural population as proportion of total population, by major areas, 1950–2050



Source: United Nations, 2014, "World Urbanization Prospects," p. 8.

Figure 7.
Contribution to the increase in urban population by country, 2014 to 2050



Source: United Nations. 2014. "World Urbanisation Prospects." p. 13.

How might urbanisation lead to **conflict**?



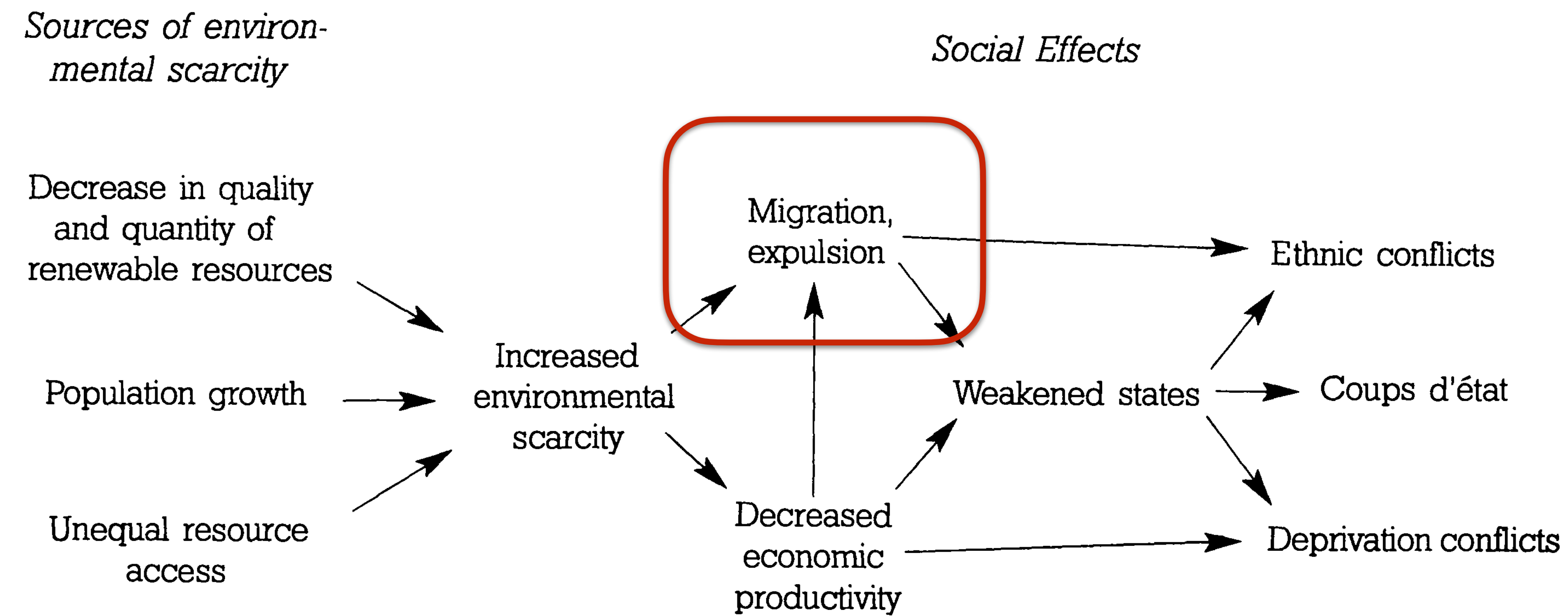
Urbanization and conflict

Urbanization can lead to scarcity—especially fresh water.

Goldstone (2016) suggests that urbanization that is not matched by increased job opportunities and economic growth can increase risk of violence.

Social and cultural change in dense cities may also reduce opportunity costs.

Figure 2. Some Sources and Consequences of Environmental Scarcity.



Lecture question #3

Urbanization makes it easier for people with grievances to coordinate and act on their grievances.

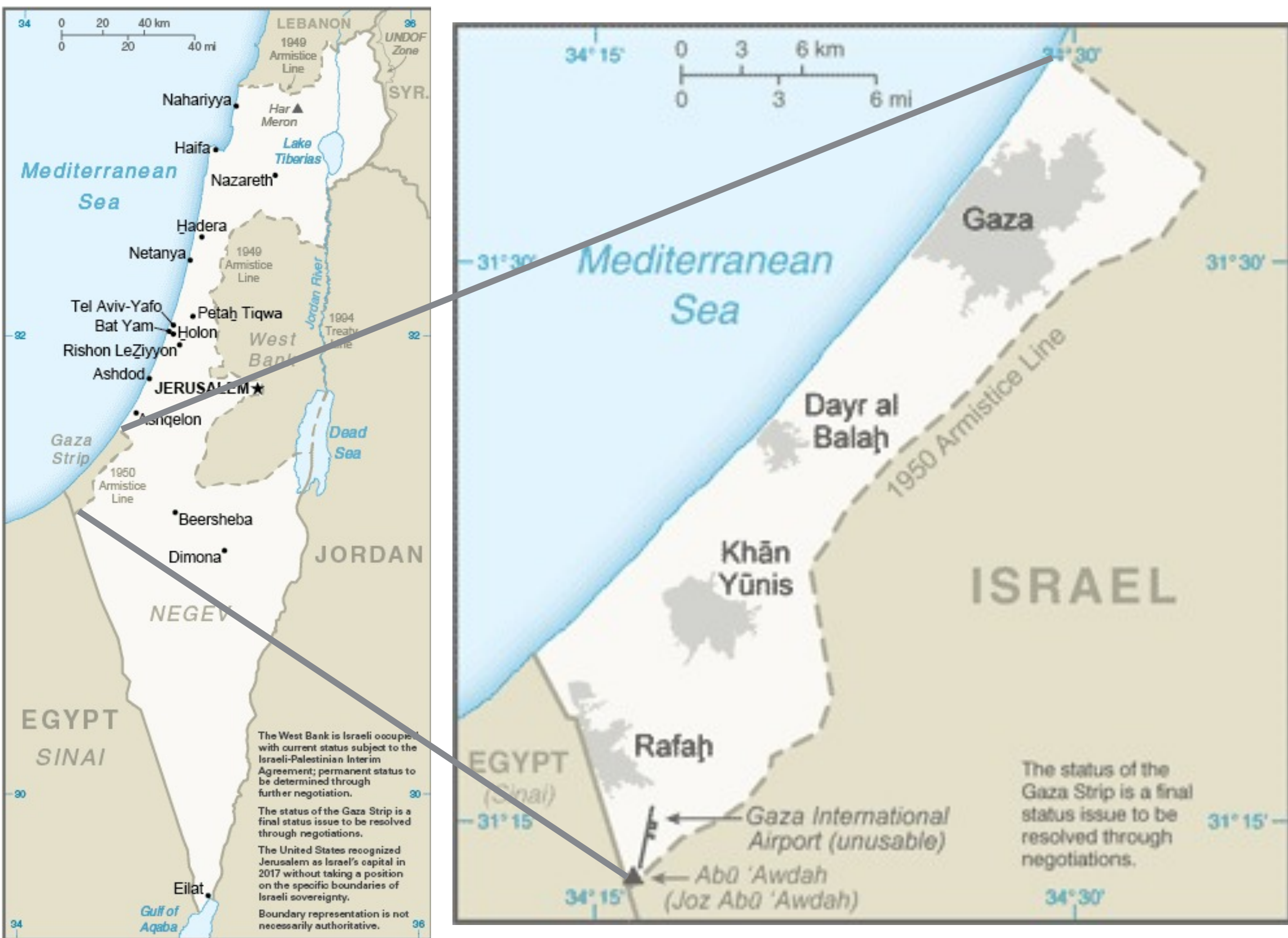
Urbanization also makes it easier for governments to control their population and provide services.

Do you think urbanization is an important driver of conflict?

V. A brief Gaza Strip case study



Image source: Reuters (<https://www.independent.co.uk/news/world/middle-east/gaza-bombing-israel-palestine-rocket-fire-airstrike-a9682231.html>)



Source: CIA Factbook (<https://www.cia.gov/library/publications/the-world-factbook/geos/is.html>;
<https://www.cia.gov/library/publications/the-world-factbook/attachments/maps/GZ-map.jpg>)

Gaza Strip fast facts

Population: 1,918,221 (July 2020 est.)

Area: 360 sq.km. (less than 1/6th of the ACT 's
2,358 sq.km.)

Pop. density: 5,328 per sq.km. (ACT's is 151)

Median age: 18

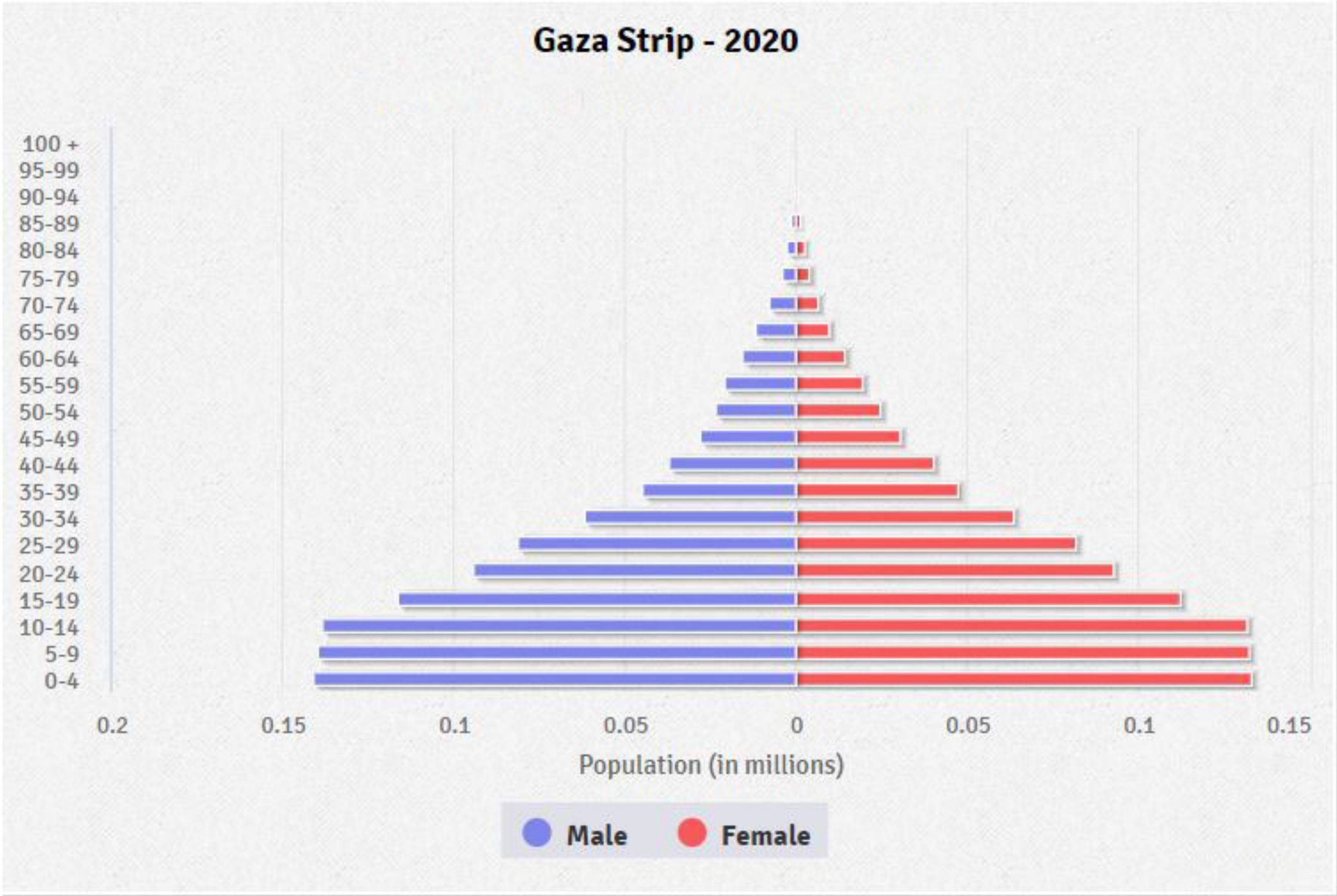
Urbanization: 76.7% (July 2020 est.)

Unemployment (total): 42.2%

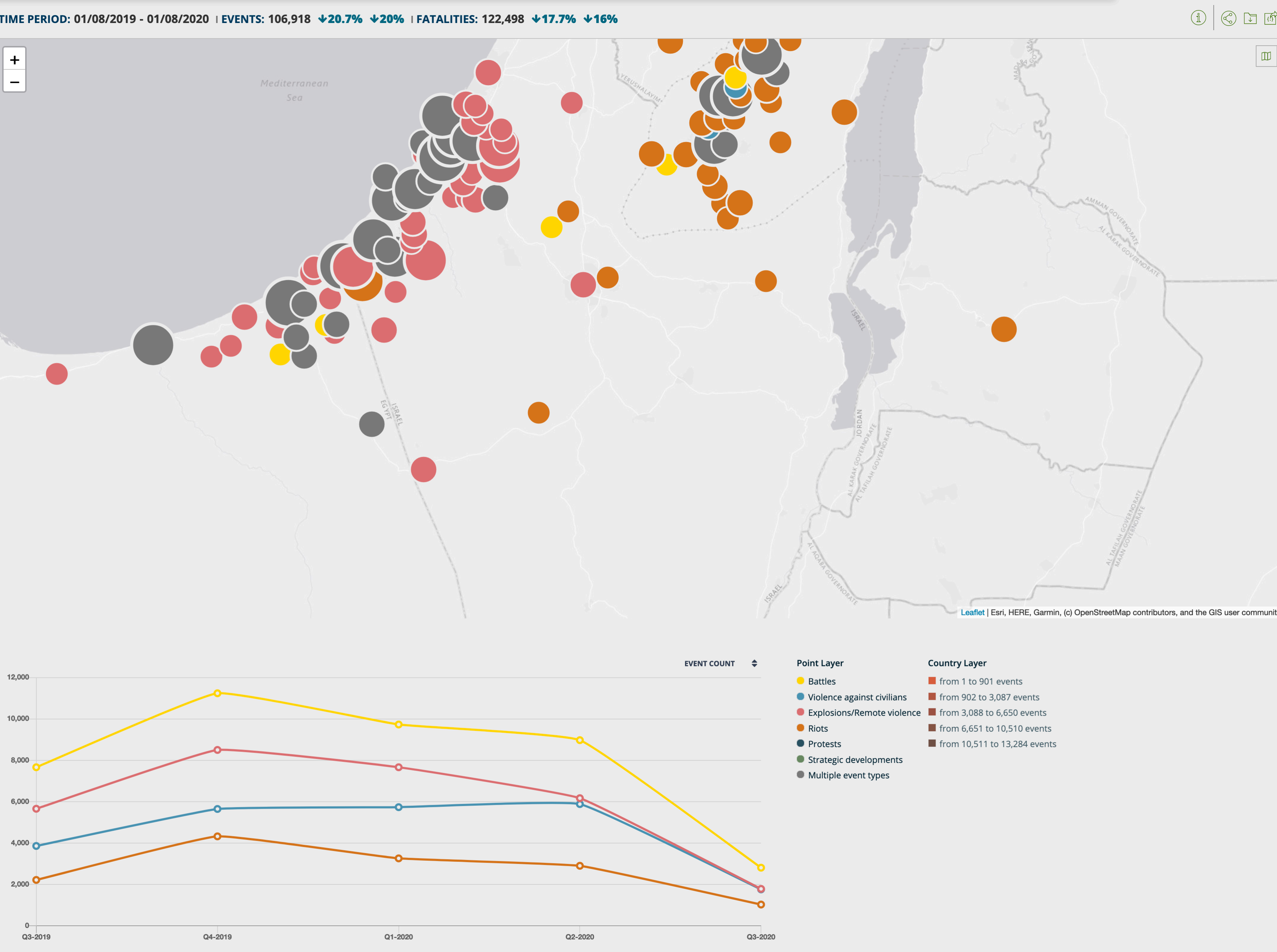
male: 37%

female: 69.4%

Source: CIA Factbook

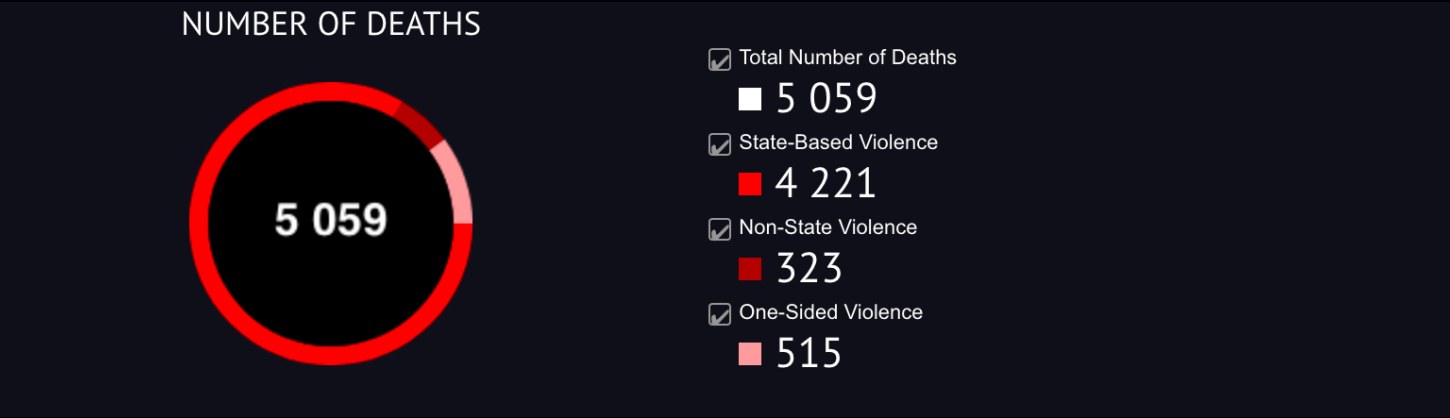


Source: CIA Facebook (<https://www.cia.gov/library/publications/the-world-factbook/geos/gz.html>)



Source: ACLED (<https://acleddata.com/dashboard/#/dashboard>)

Hamas



This topic ties with next week's discussion of migration.

