

The population bomb, food production, and food prices: An optimistic perspective

David Lam, University of Michigan

IUSSP Webinar on Population, Food
and the Environment

April 9, 2021

How the World Survived the Population Bomb

Lessons from 50 Years of
Extraordinary Demographic History

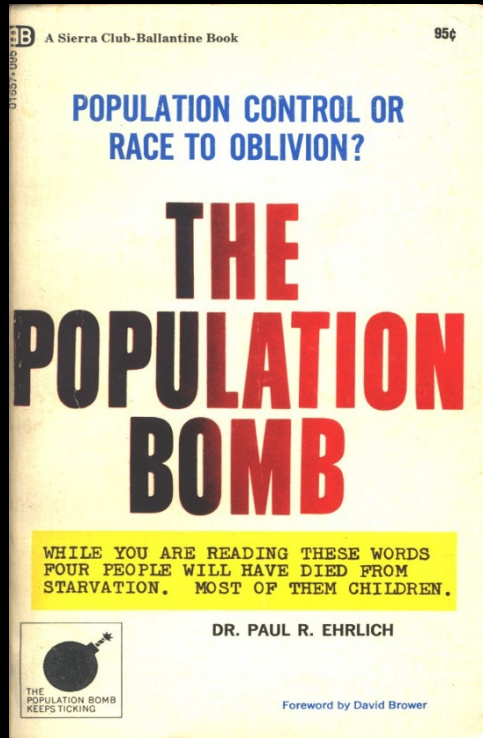
David Lam, University of Michigan

Population Association of America Presidential Address

April 1, 2011

Key points of my PAA address

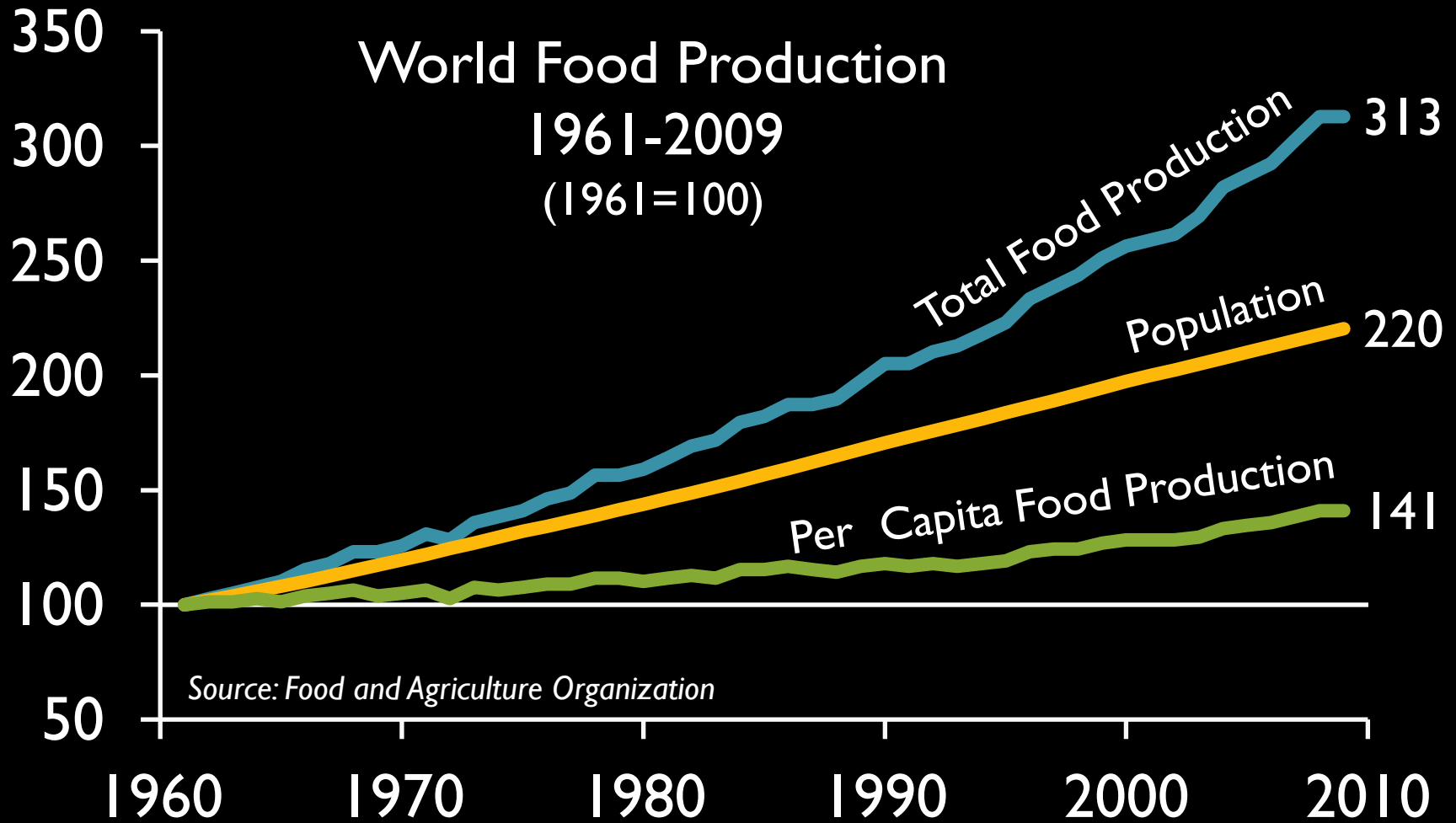
- The world hit 7 billion population in 2011, up from 3 billion people in 1960
- The world's population growth rate peaked around 1965 at about 2.1% per year
- This was unprecedented population growth that will never be seen again
- How did the world do in three areas of concern?
 - Would we be able to feed everyone?
 - Would we run out of resources?
 - Would poverty increase?



“The world, especially the developing world, is rapidly running out of food.... In fact, the battle to feed humanity is already lost, in the sense that we will not be able to prevent large-scale famines in the next decade or so.”

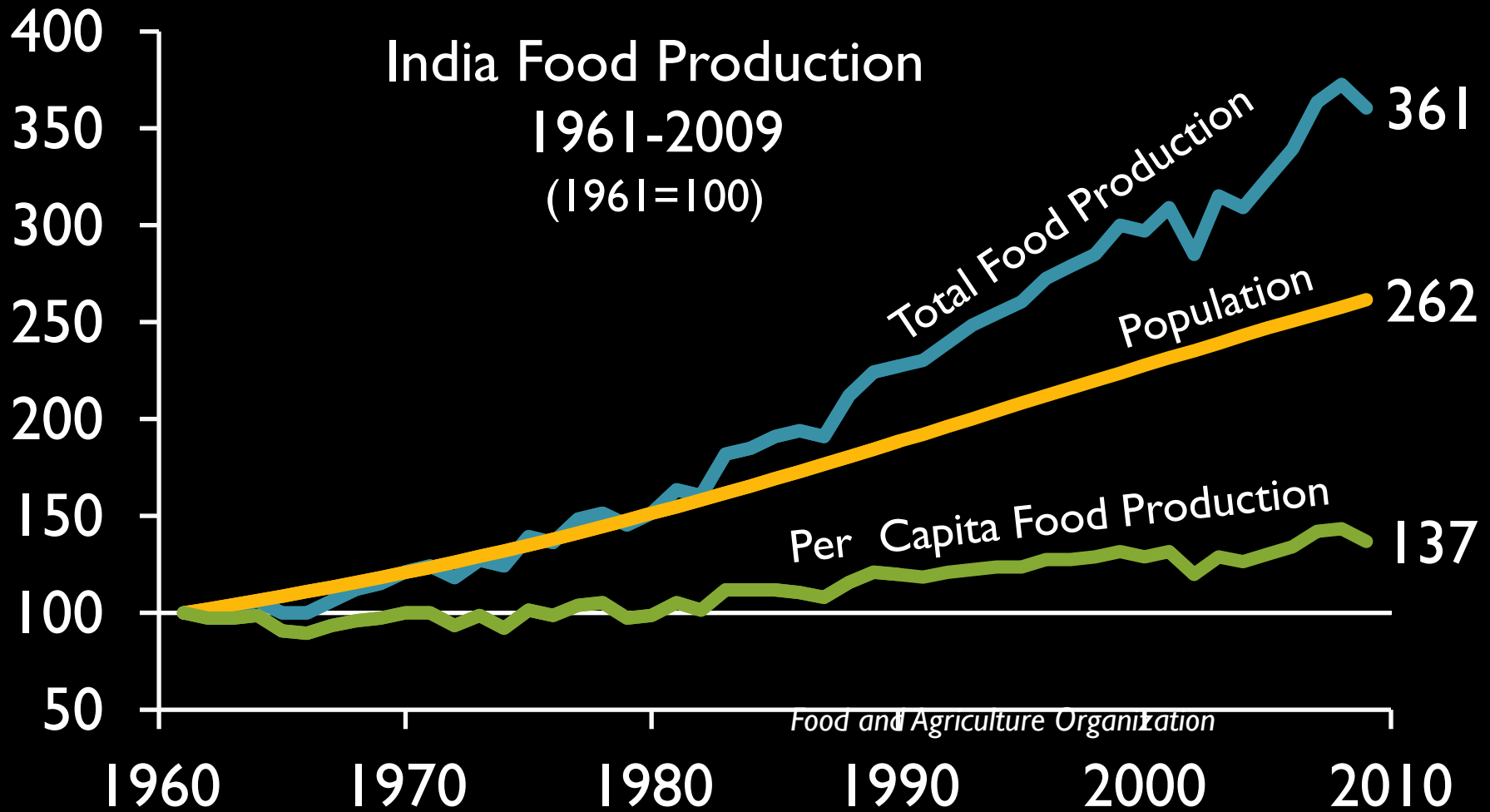
- Paul Ehrlich, *The Population Bomb*, 1968

World Food Production 1961-2009 (1961=100)

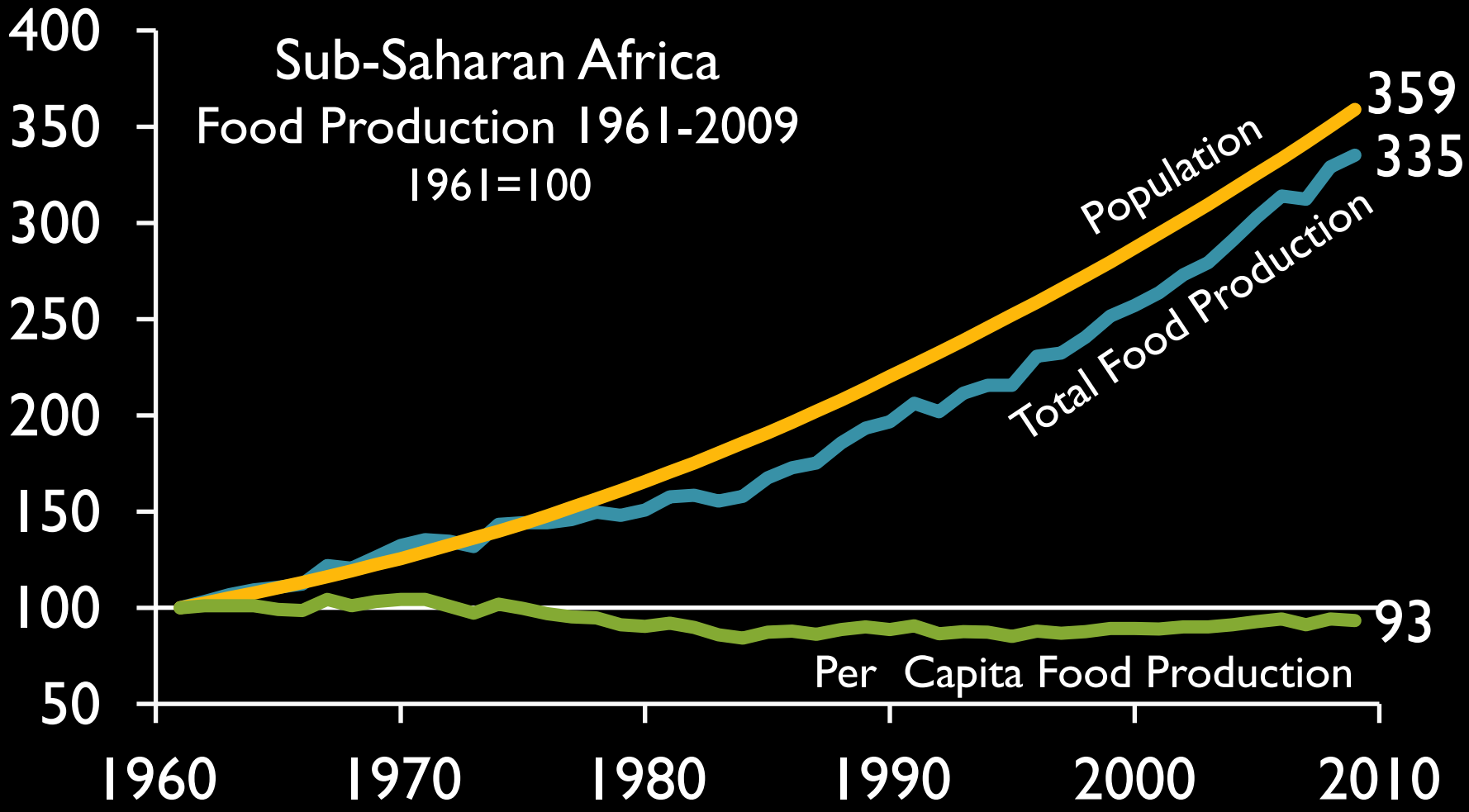


Source: Food and Agriculture Organization

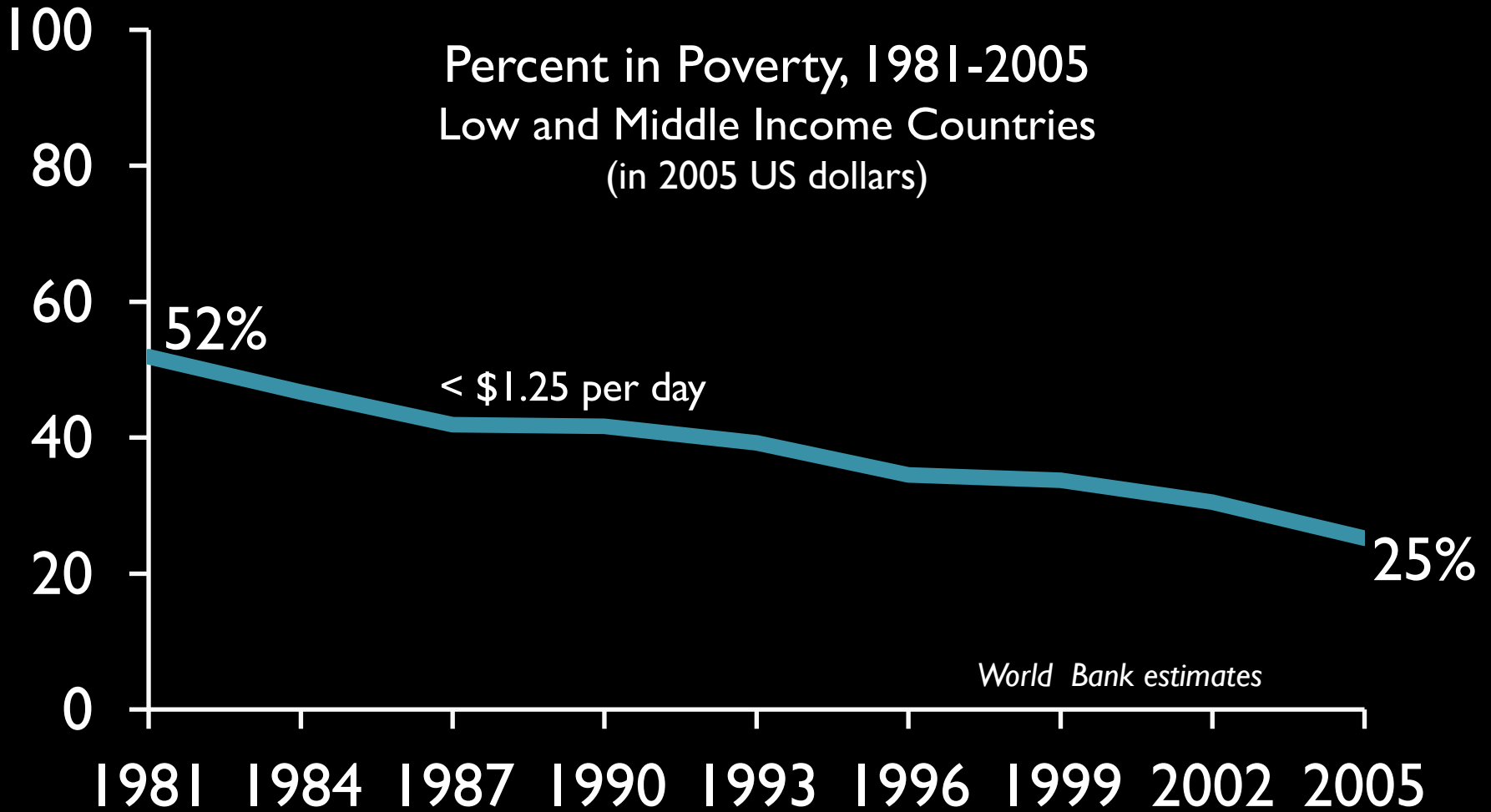
India Food Production 1961-2009 (1961=100)

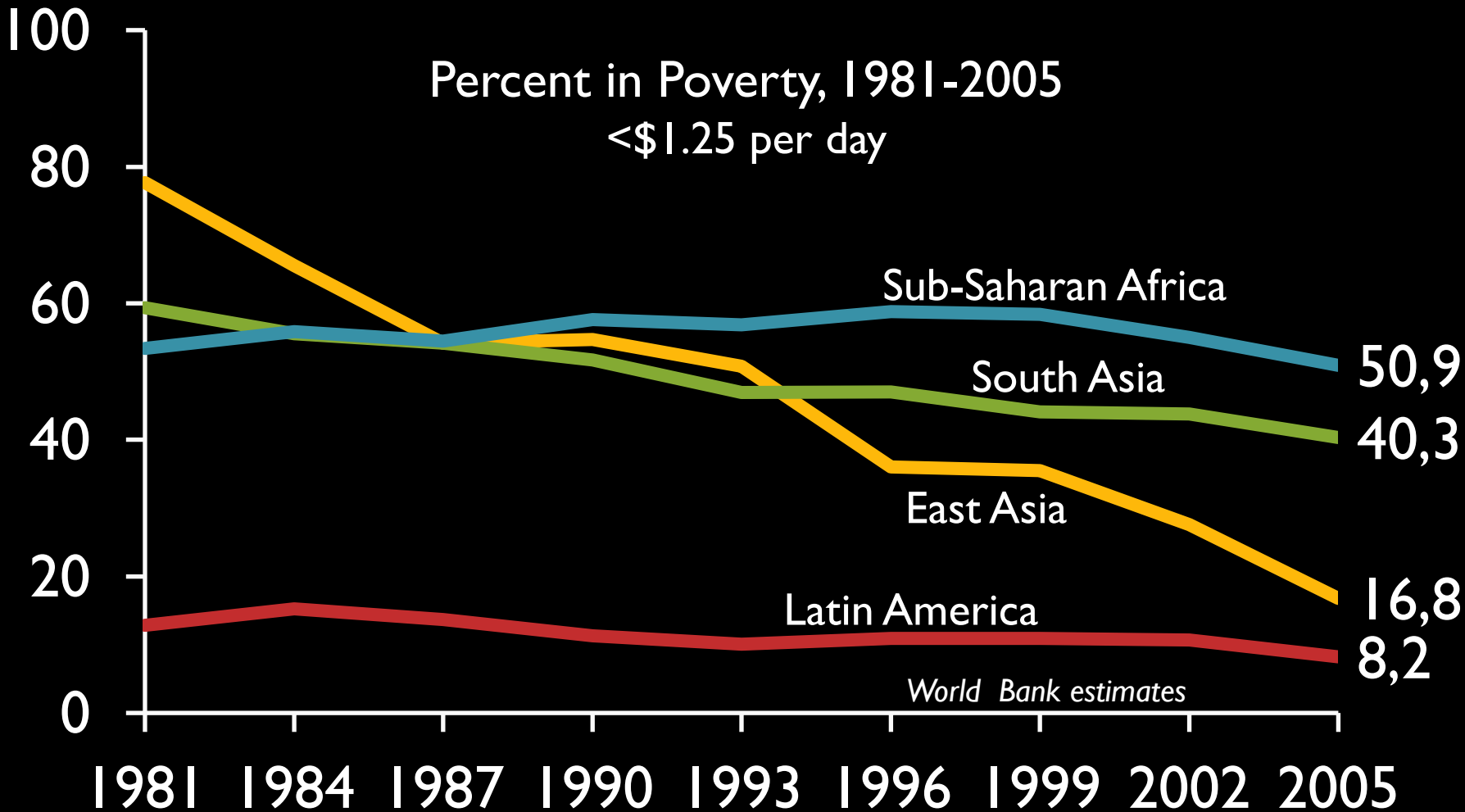


Food and Agriculture Organization



Percent in Poverty, 1981-2005
Low and Middle Income Countries
(in 2005 US dollars)





JULIAN L. SIMON

THE ULTIMATE RESOURCE 2



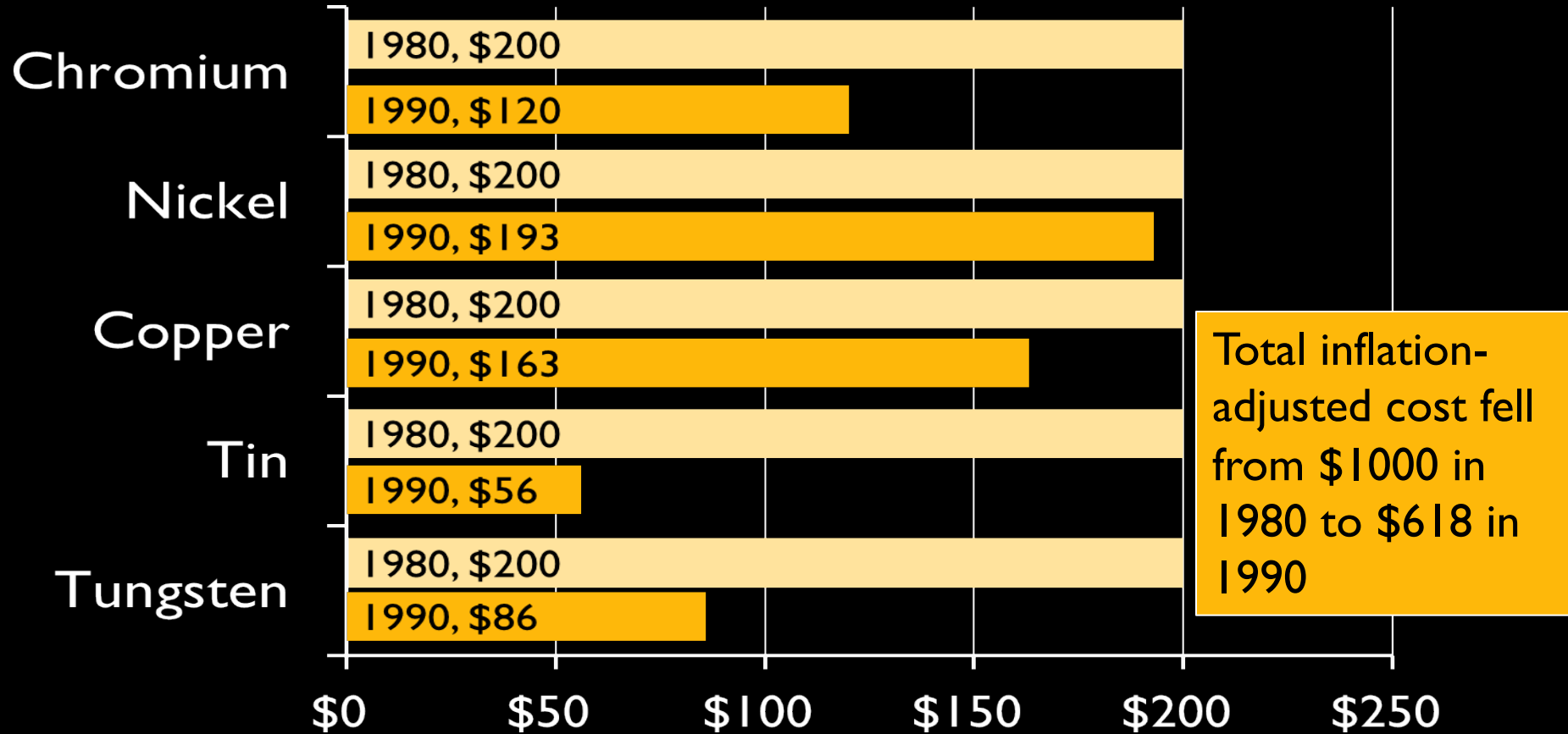
Natural resources . . . pollution
. . . world's food supply . . .
pressures of population growth.
. . . Every trend in material
human welfare has been
improving—and promises to
continue to do so, indefinitely.

With an Appreciation by Milton Friedman

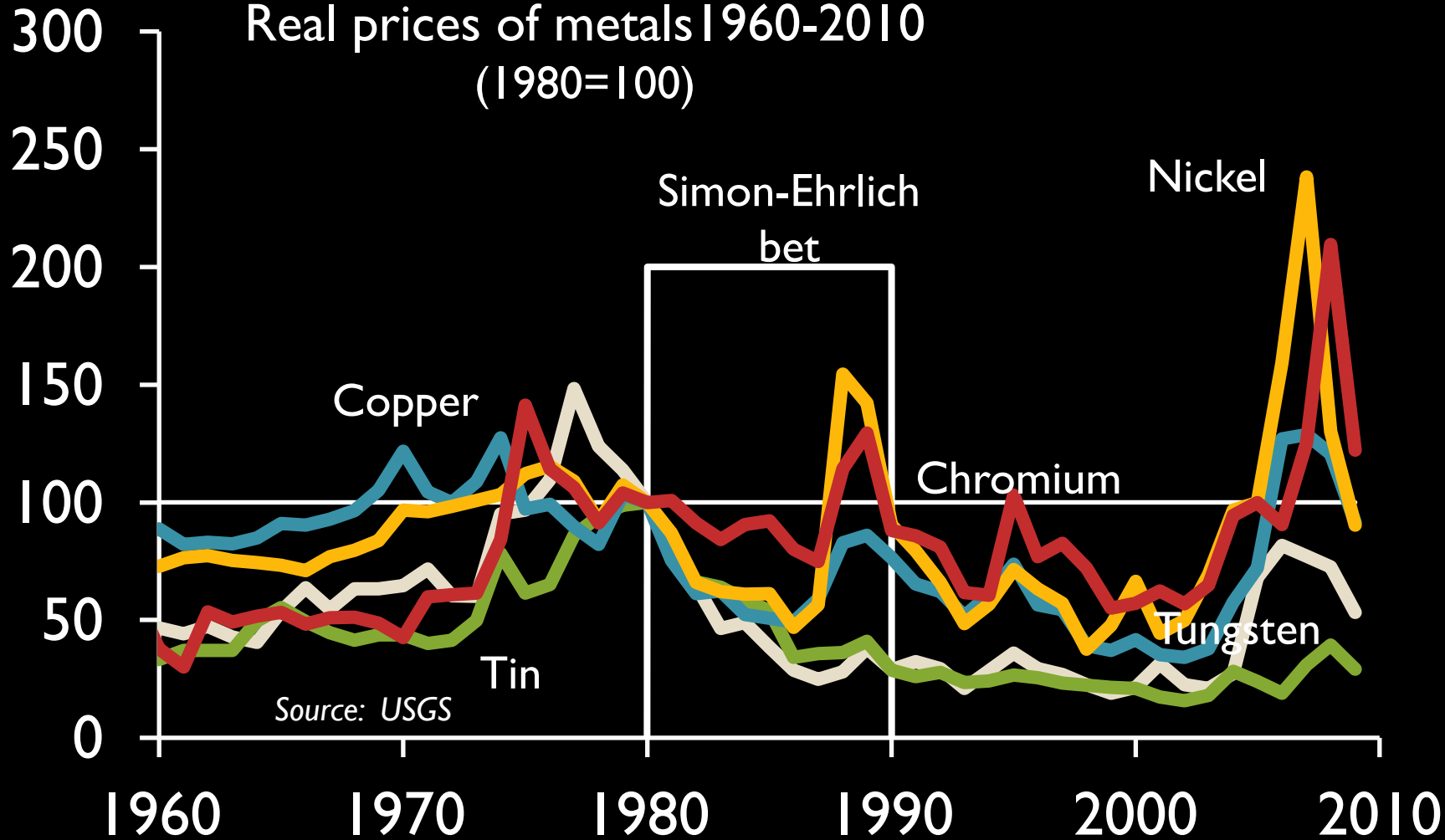
“If you are prepared to pay me now the current market price for \$1,000 worth of any mineral you name, I will agree to pay you the market price of the same amount of that raw material on any future date you now specify.”

Julian Simon, 1981
The Ultimate Resource

Julian Simon's bet with Paul Ehrlich

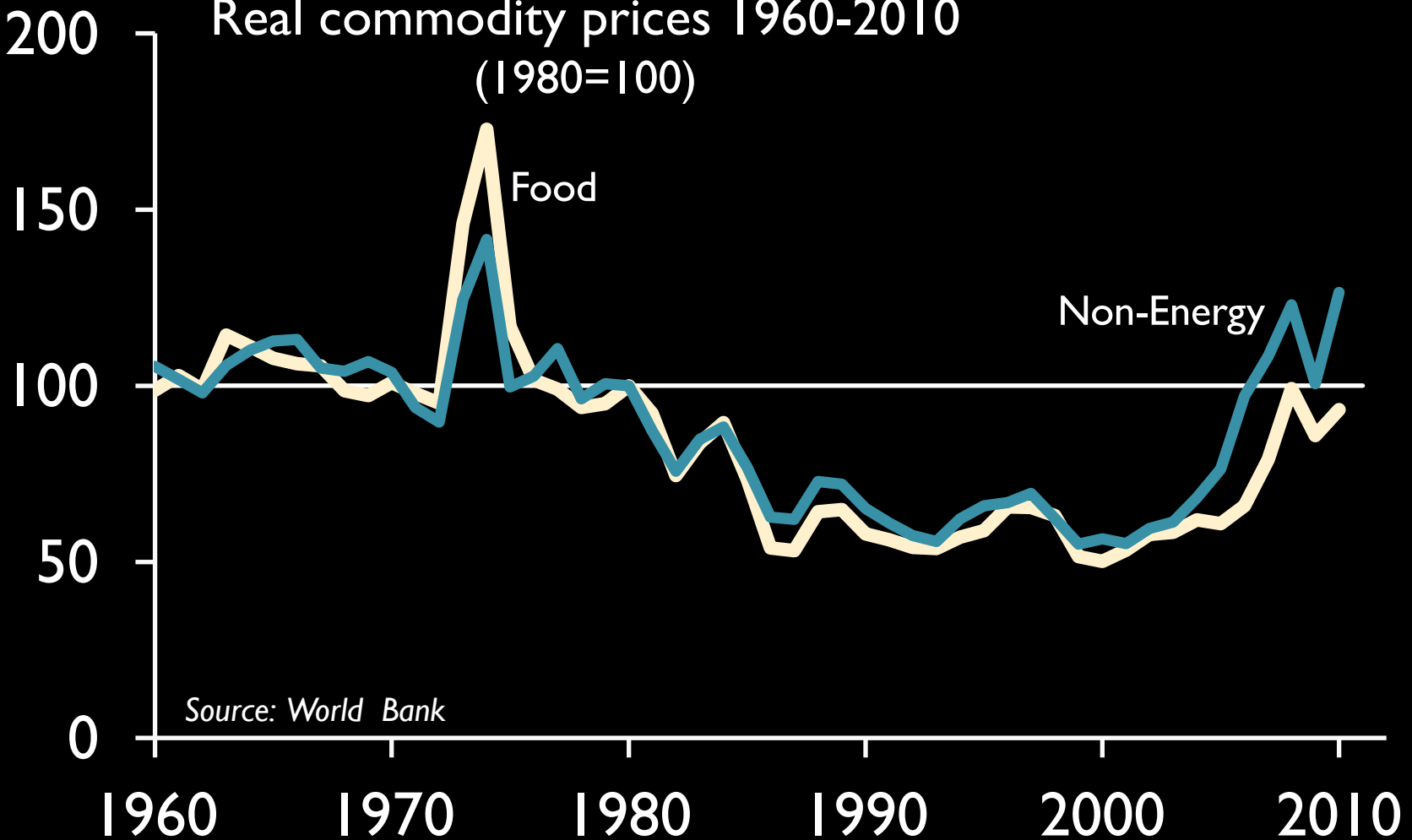


Real prices of metals 1960-2010 (1980=100)

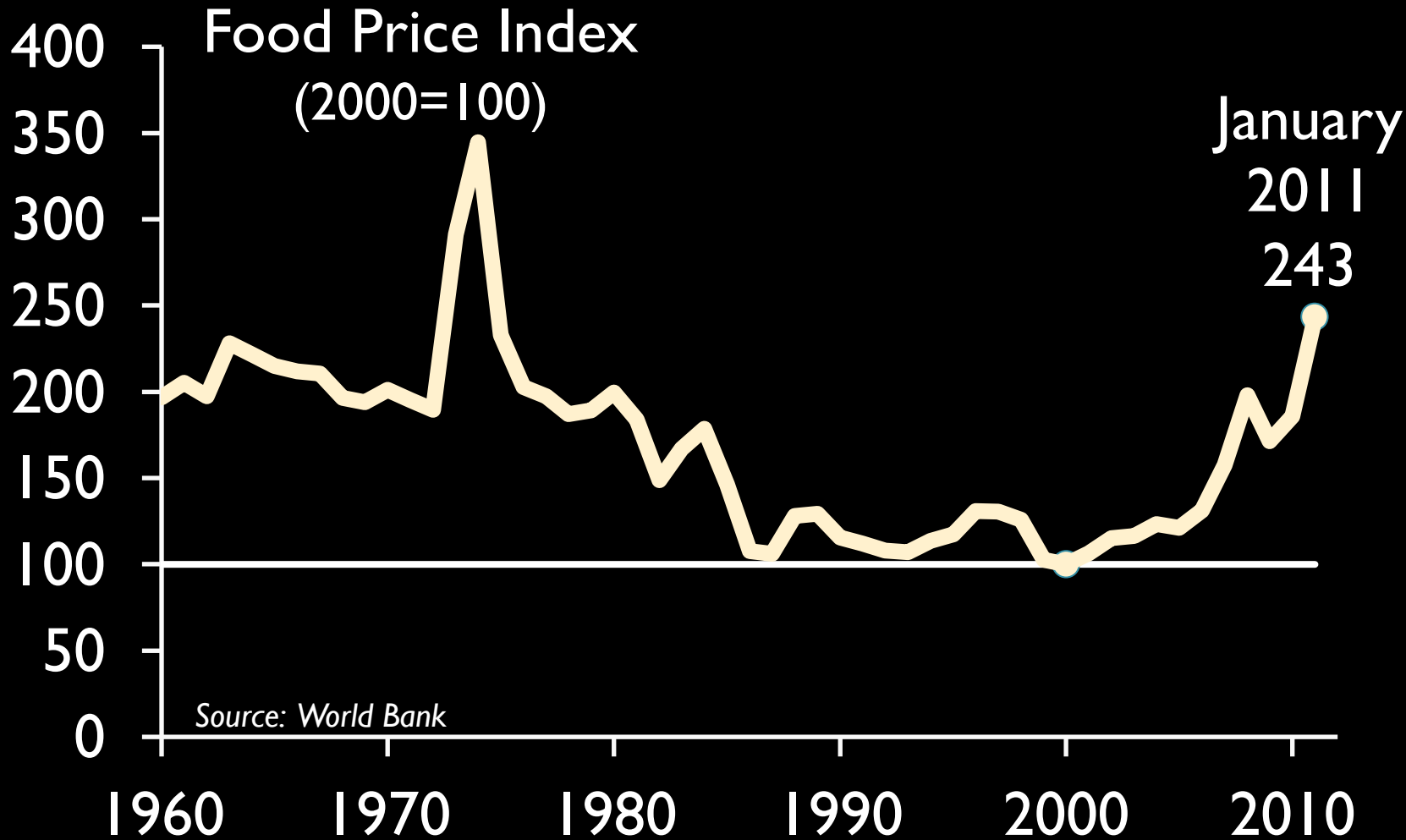


Real commodity prices 1960-2010

(1980=100)



Source: World Bank



*To be continued after we hear from Stan
Becker and hear the results of the wager ...*

Population group chosen by Stan to receive David's \$194 donation

Population Media Center



Mission: “To use entertainment-education and mass media to promote social and cultural change by addressing the interconnected issues of the full rights of women and girls, population, and the environment. Our goals are to empower people to live healthier and more prosperous lives and to stabilize global population at a level at which people can live sustainably with the world’s renewable resources.”

www.populationmedia.org

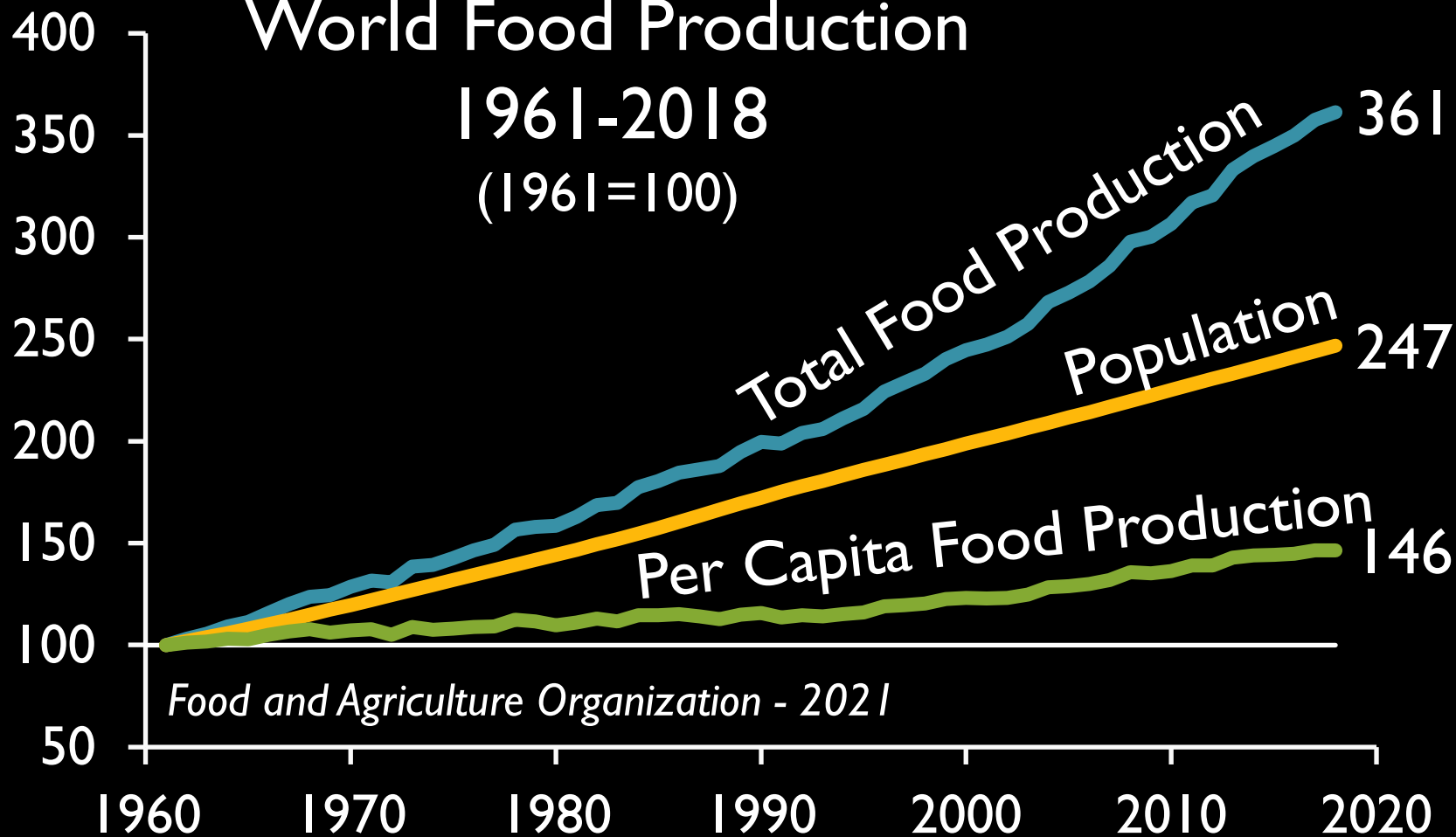
What has happened since 2011?

- World population is up to 7.85 billion, the addition of another 850 million people
- The world's population growth rate has dropped to about 1% per year
- Here are updates on:
 - Food production
 - Poverty
 - Food prices

World Food Production

1961-2018

(1961=100)

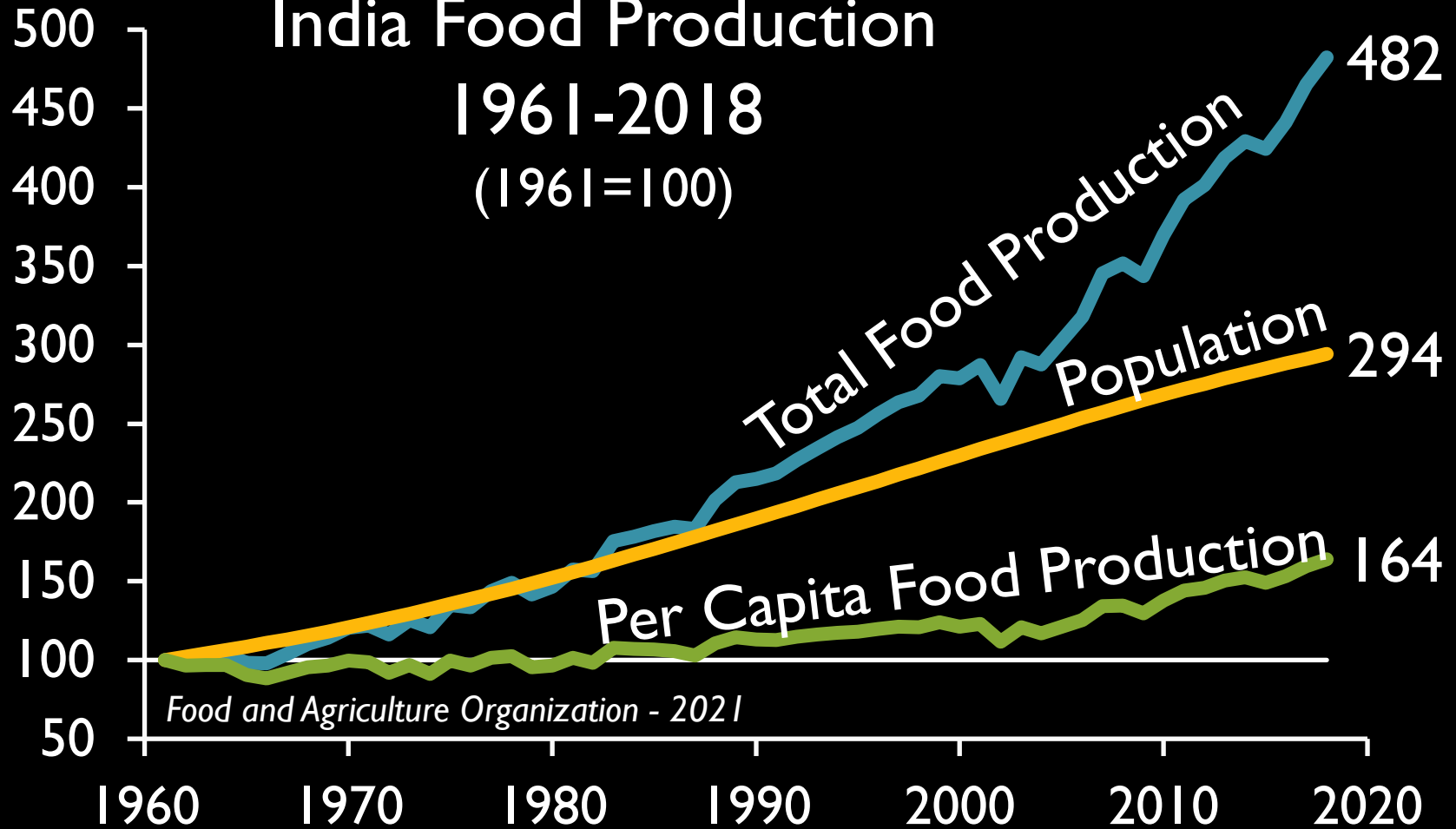


Food and Agriculture Organization - 2021

India Food Production

1961-2018

(1961=100)

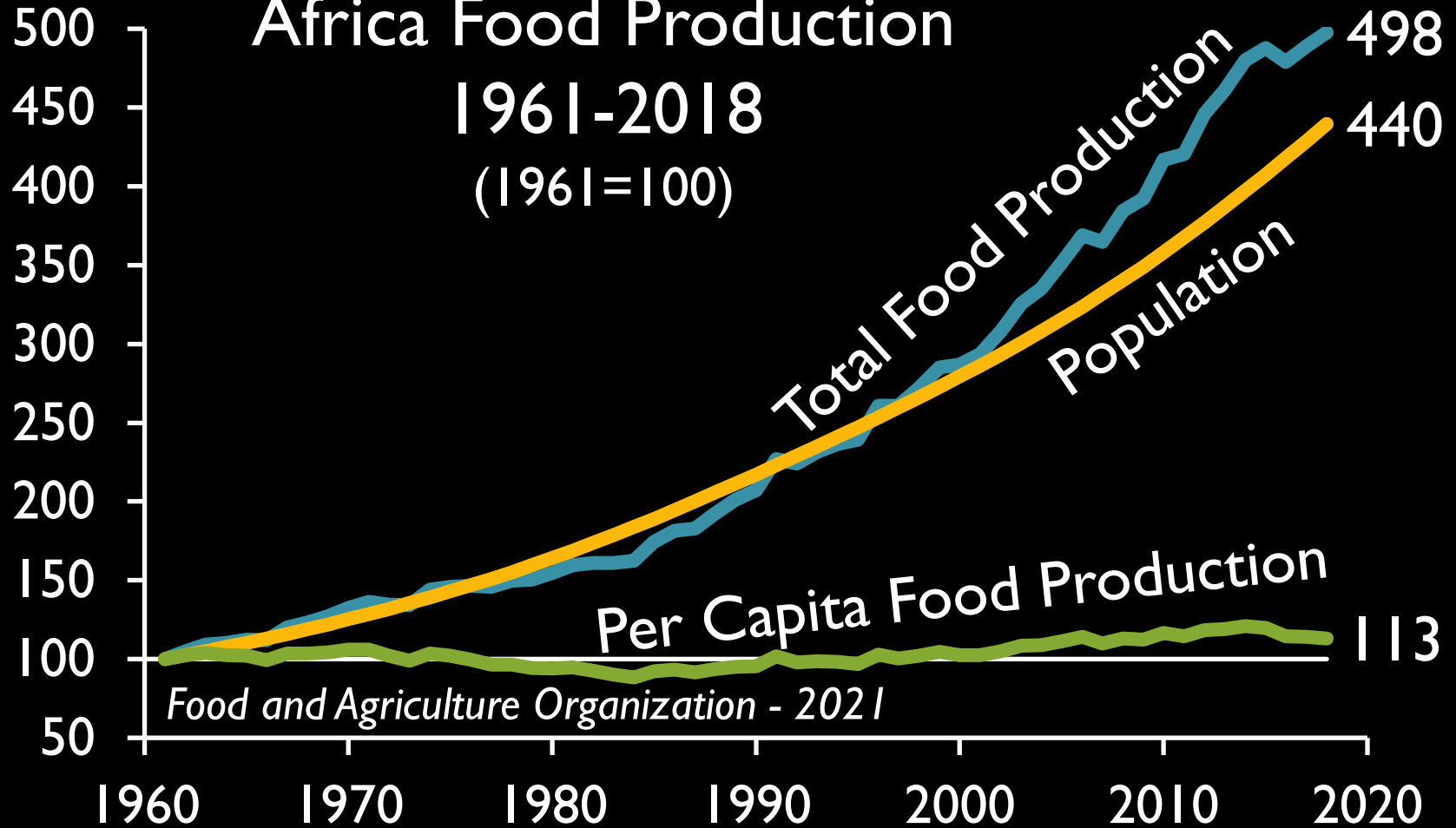


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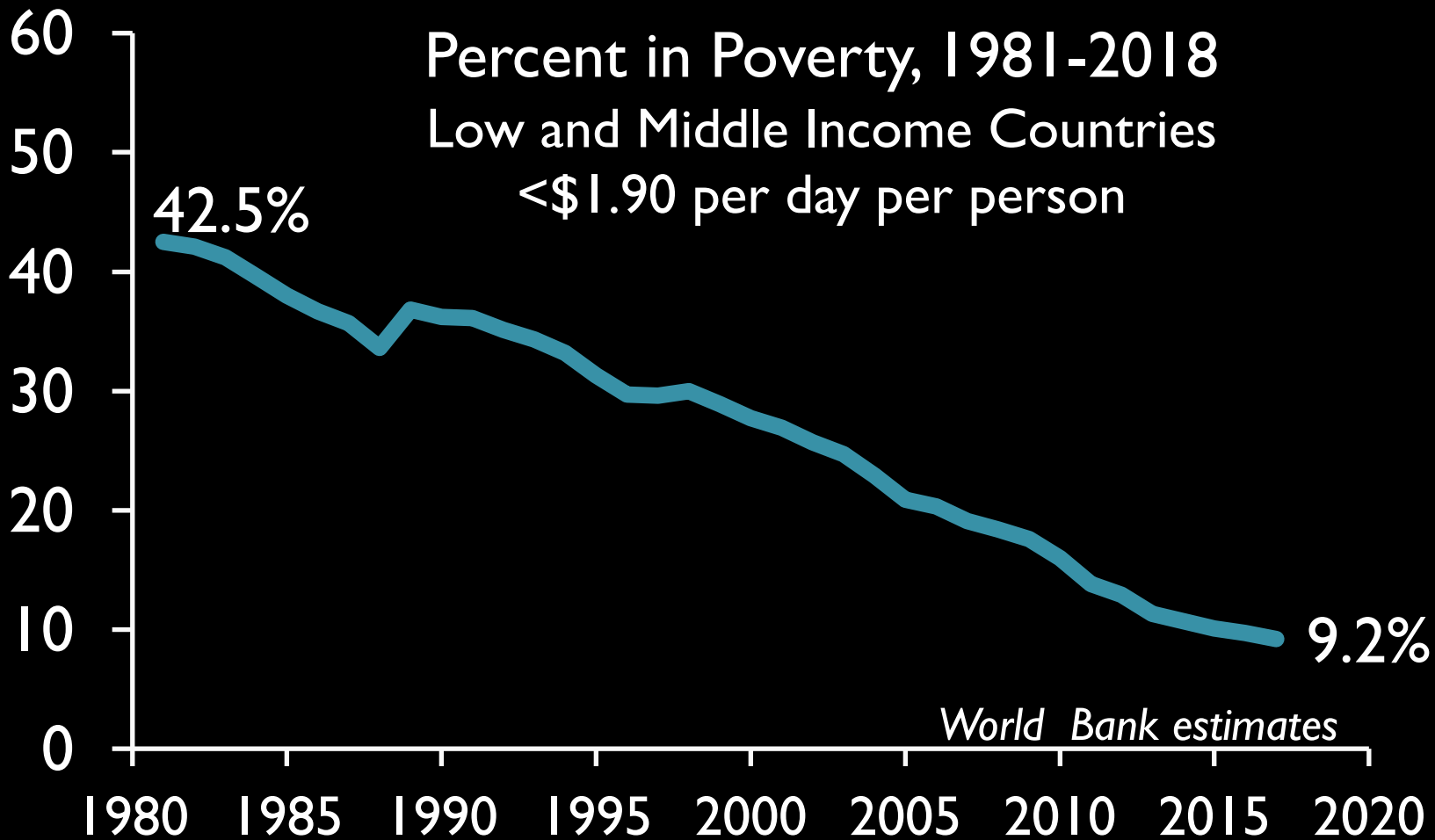
Africa Food Production

1961-2018

(1961=100)

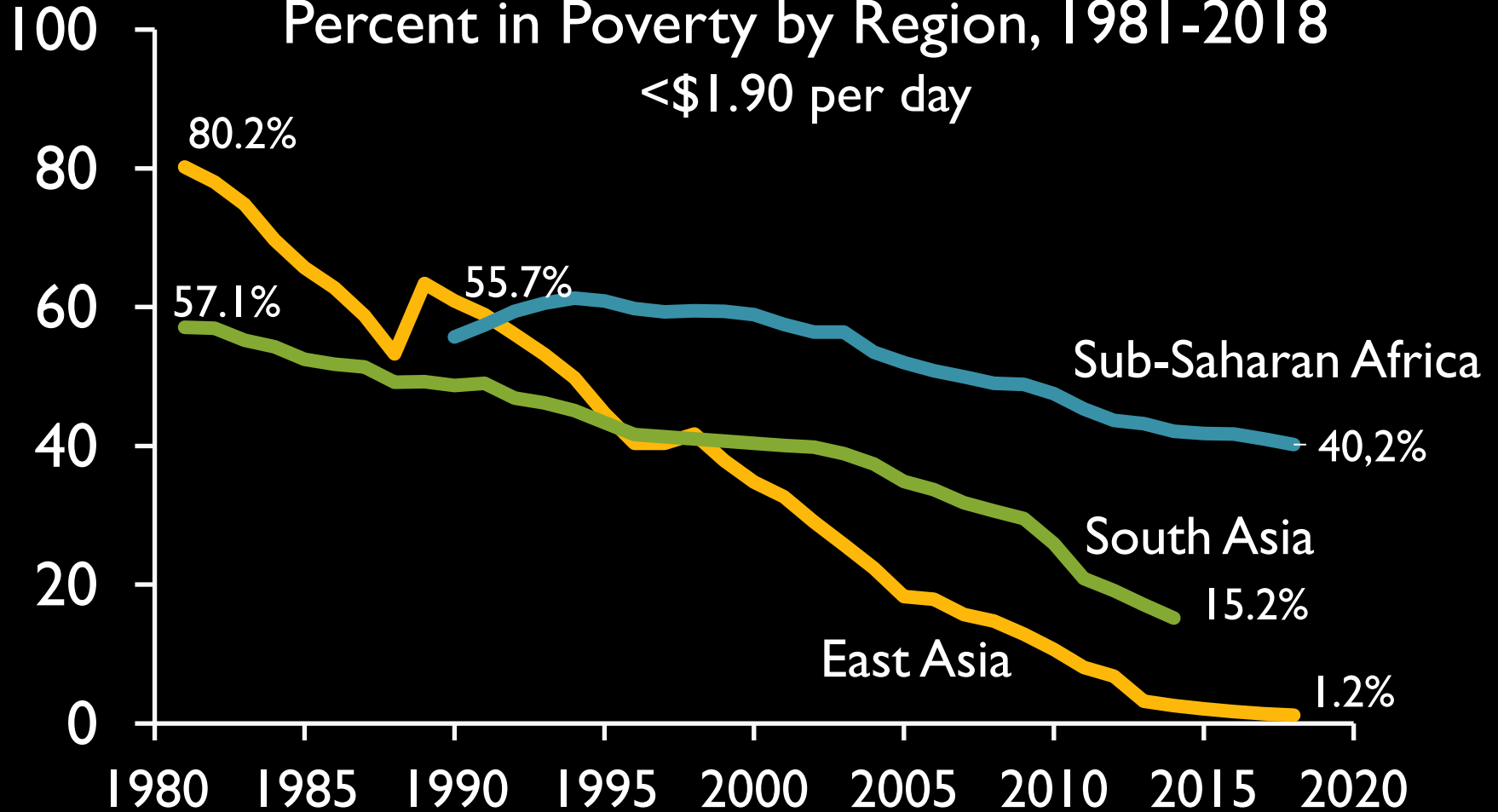


Food and Agriculture Organization - 2021



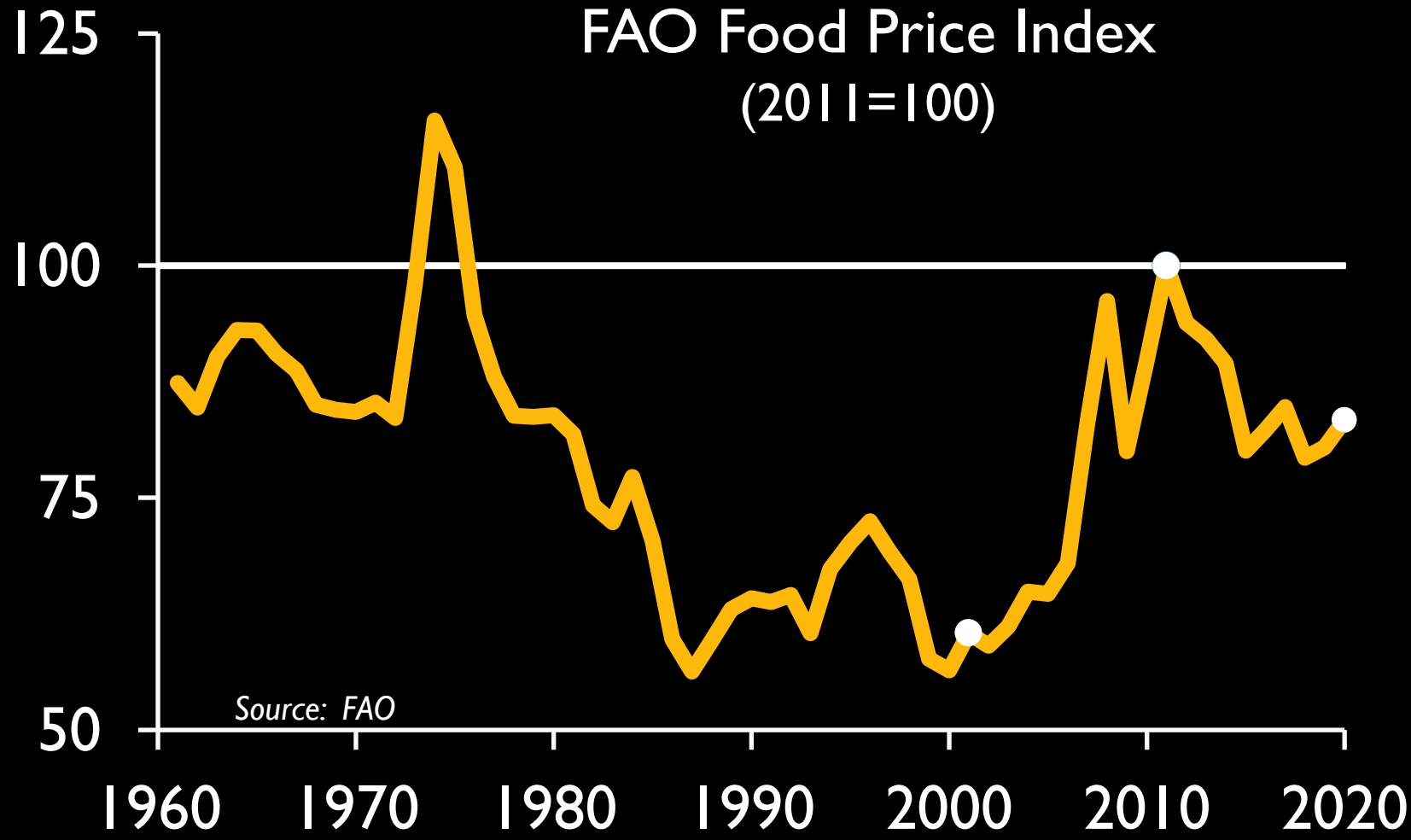
Percent in Poverty by Region, 1981-2018

<\$1.90 per day



World Bank estimates

FAO Food Price Index (2011=100)



Source: FAO

Key points

- Food production continues to grow faster than population
- Poverty continues to fall
- Many reasons for optimism that we can feed another 3 billion people, keep food affordable, and continue reducing poverty
- Should we be worried about the future?
- YES!
- Economists are as worried as anyone about climate change
- Markets create good incentives to produce more food. They do not give good incentives to produce fewer greenhouse gasses.
- Poverty reduction is still very uneven around the world, with Africa facing continued challenges.