



21ST CENTURY SUSTAINABILITY

THE CHALLENGES AND OPPORTUNITIES AHEAD

BY ANTONIO RAIMONDI

Sustainability?

Environmental

Demographic

Economic

Technological

Political

Environmental sustainability



Climate Change



Food Security

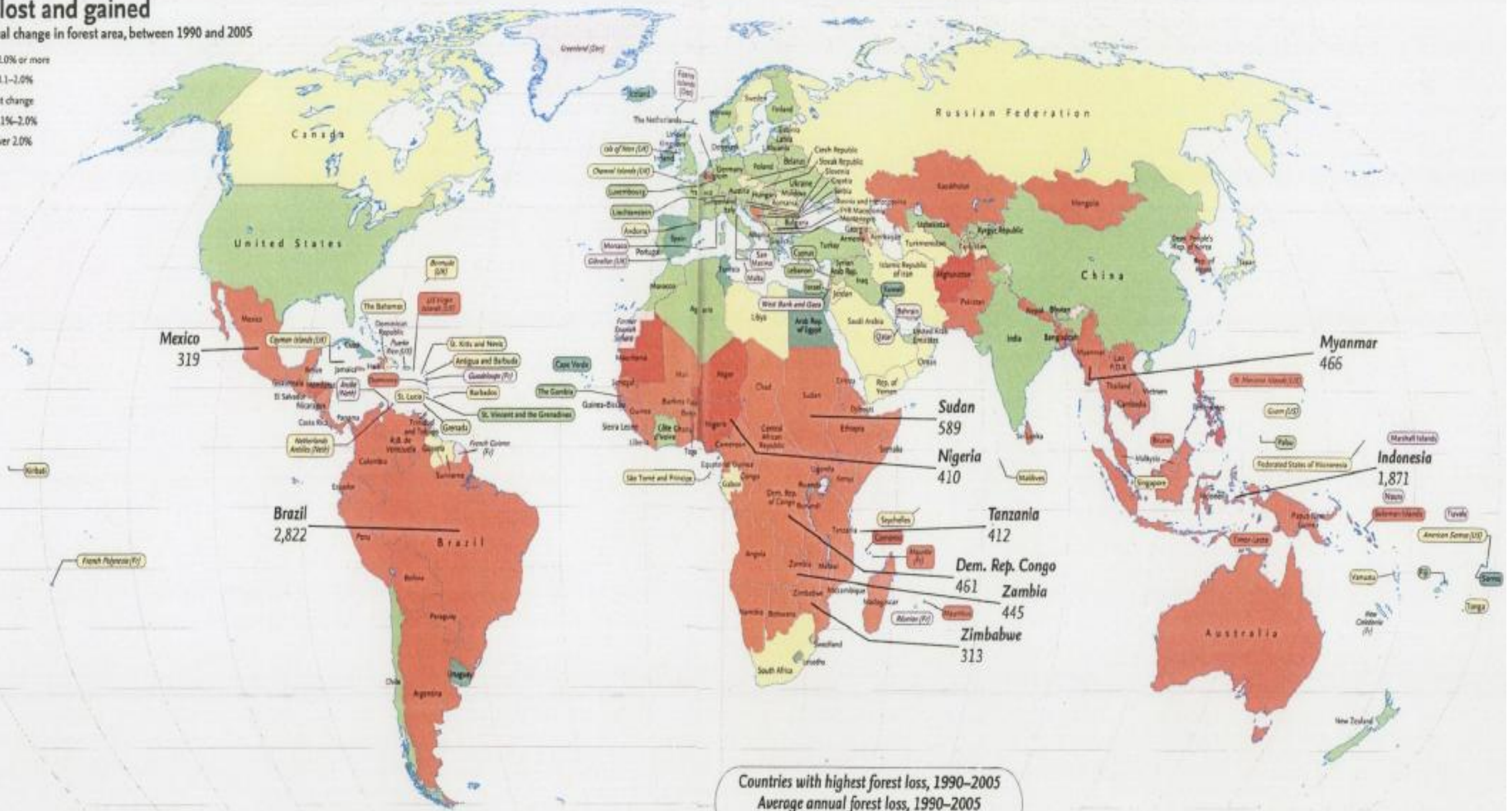


Among the
effects of
Climate
change...

Forest lost and gained

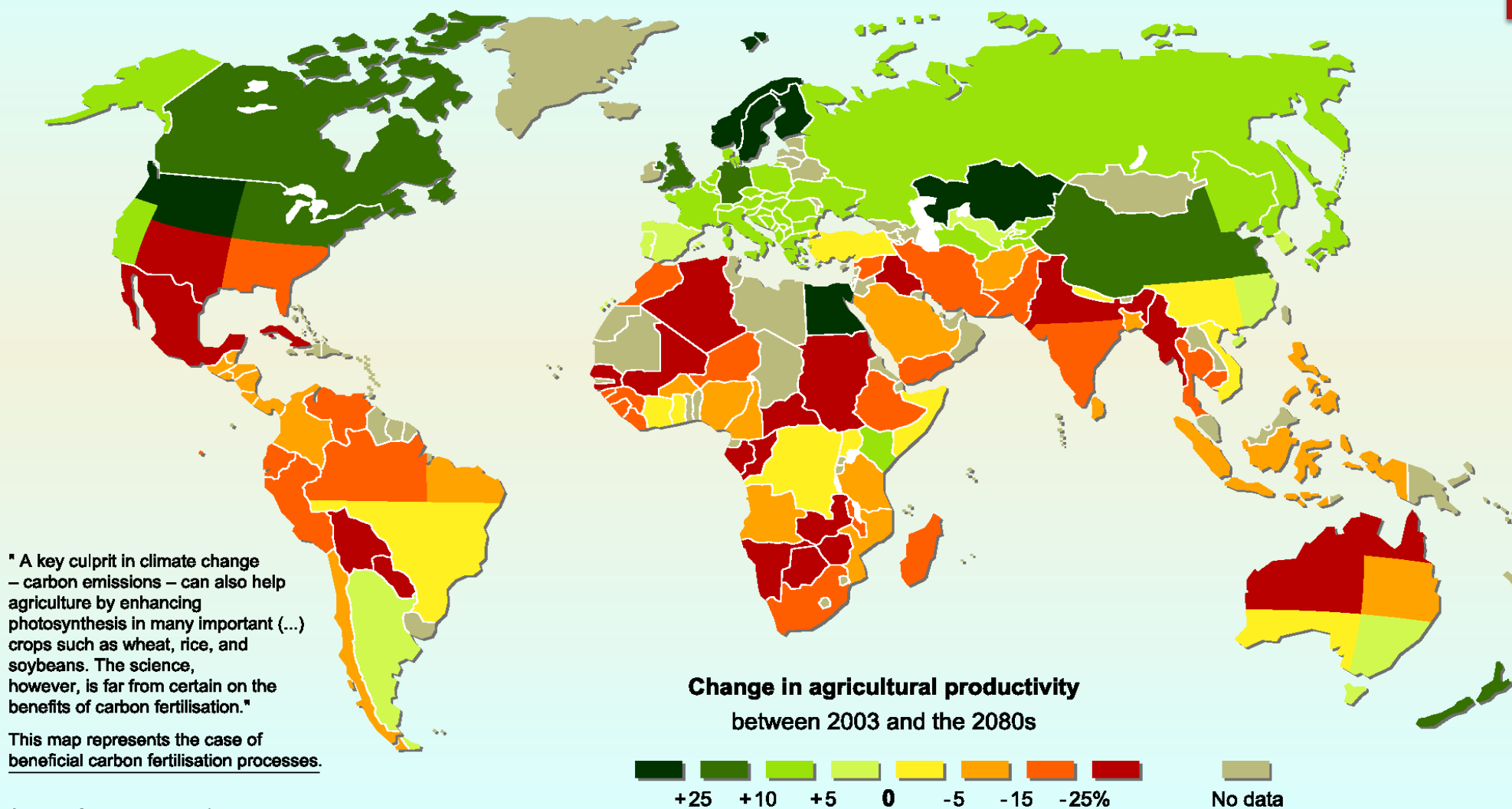
Average annual change in forest area, between 1990 and 2005

increase of 2.0% or more
increase of 0.1–2.0%
significant change
decrease of 0.1%–2.0%
decrease of over 2.0%
no data



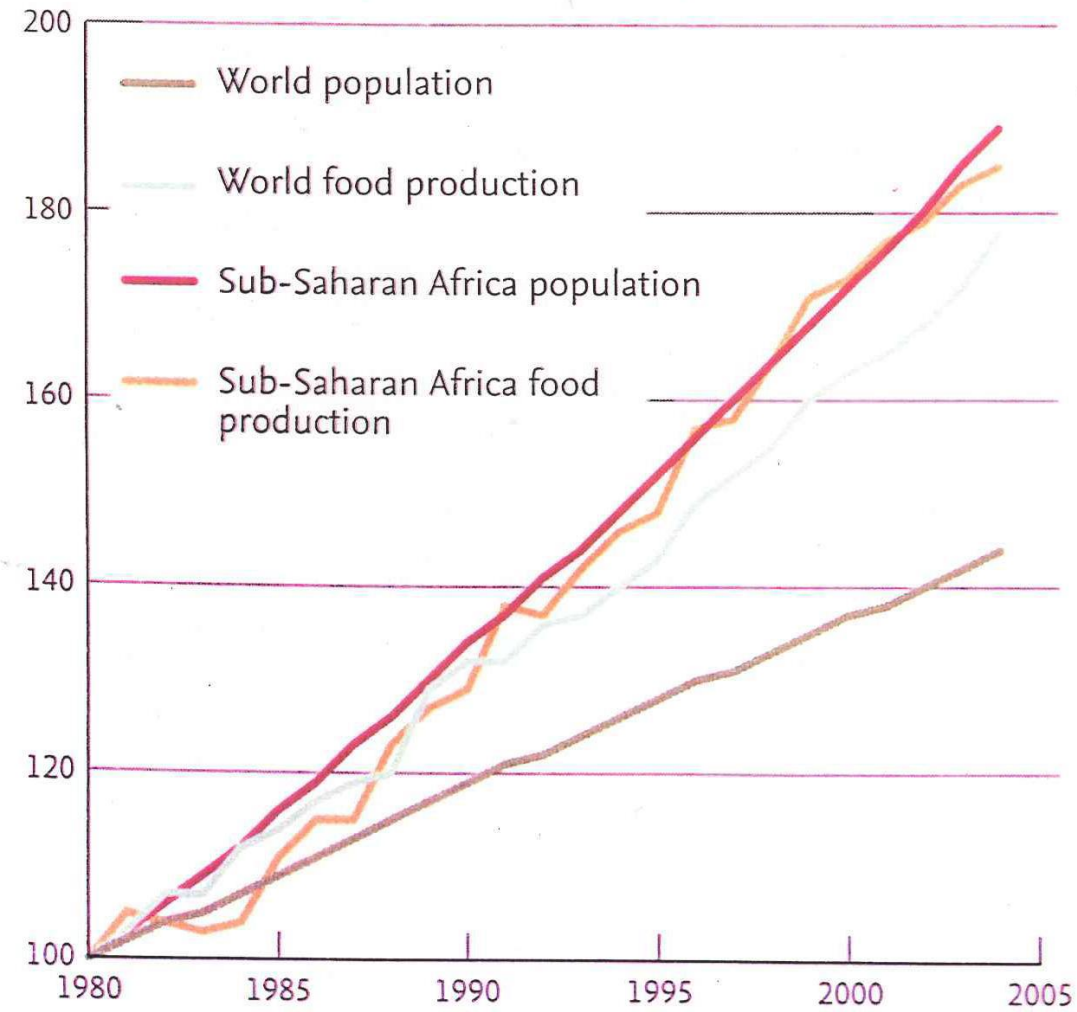
Countries with highest forest loss, 1990–2005
Average annual forest loss, 1990–2005
(thousand hectares)

Projected impact of climate change on agricultural yields

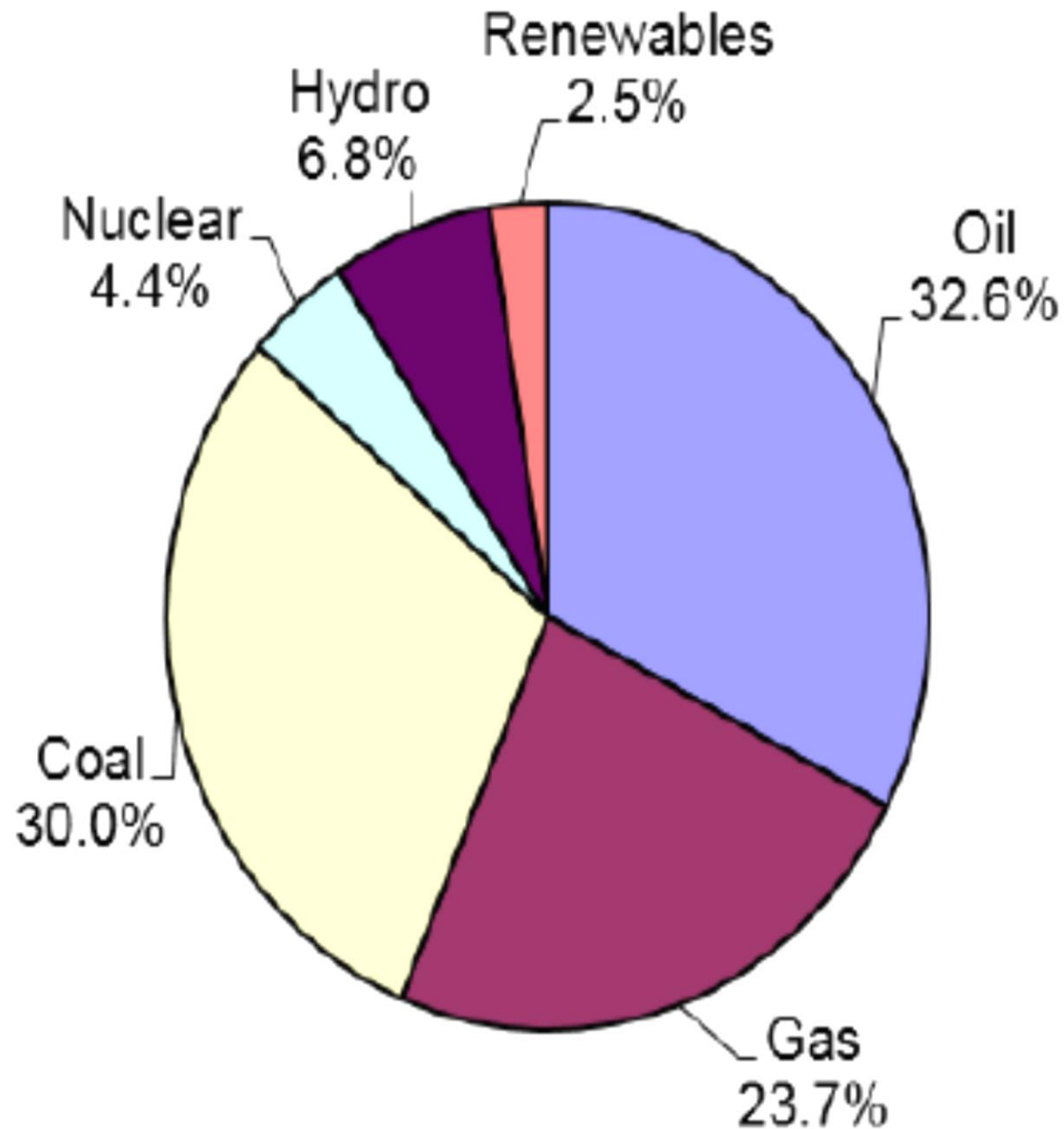


Source: Cline W., 2007, *Global Warming and Agriculture*.

Population and food production indexes (1980=100)



Source: Food and Agriculture Organization



World energy consumption

(E. Colombo
Politecnico
Milano, 2015)

Demographic sustainability



Human Mobility- National and International



Urbanization



Clash of civilizations (Cultural Sustainability)

Countries with more than 100 million people, 2017

(World Development Indicators September 2018)

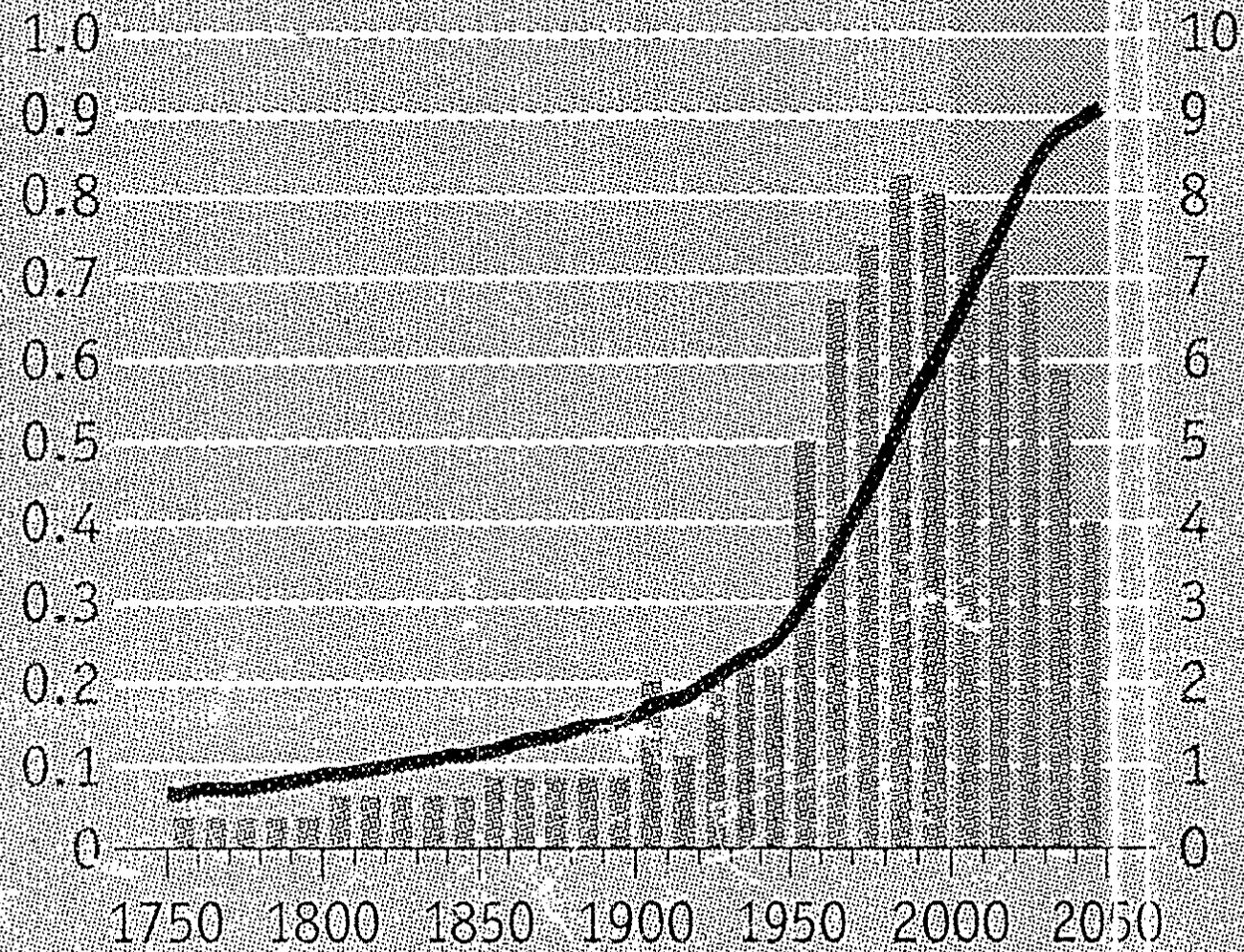
China	1.386
India	1.339
United States	326
Indonesia	264
Brazil	209
Pakistan	197
Nigeria	191
Bangladesh	165
Russian Federation	144
Japan	127
Mexico	129
Philippines	105
and Ethiopia	105

World population

Ten-year
increments, bn

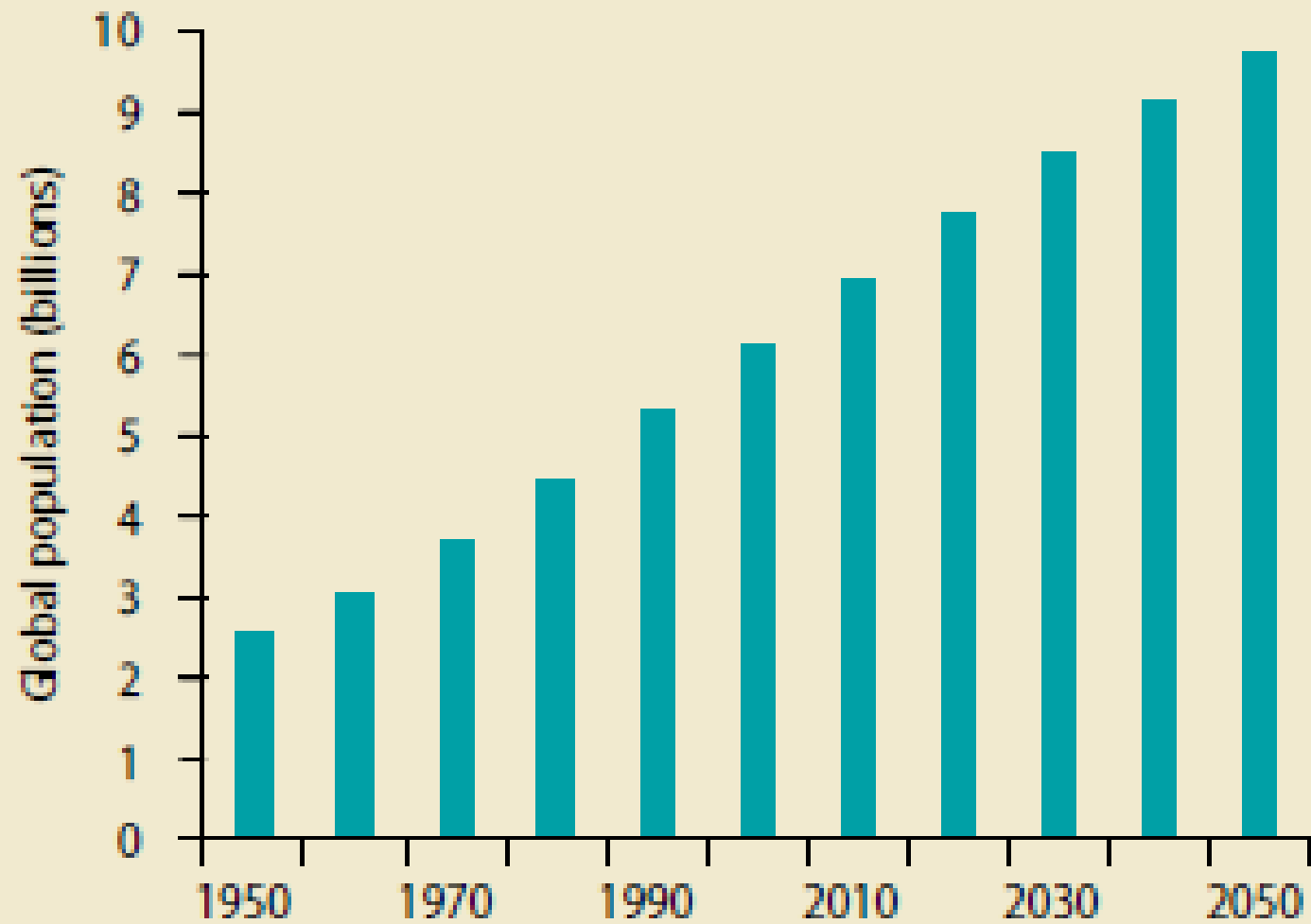
Total,
bn

F'CAST



Source: UN Population Division

a. The global population has tripled since the 1950s and is expected to reach over 9 billion by 2050



New world order

Asia North America Europe Latin America Africa

1950

2.5 Global population, bn

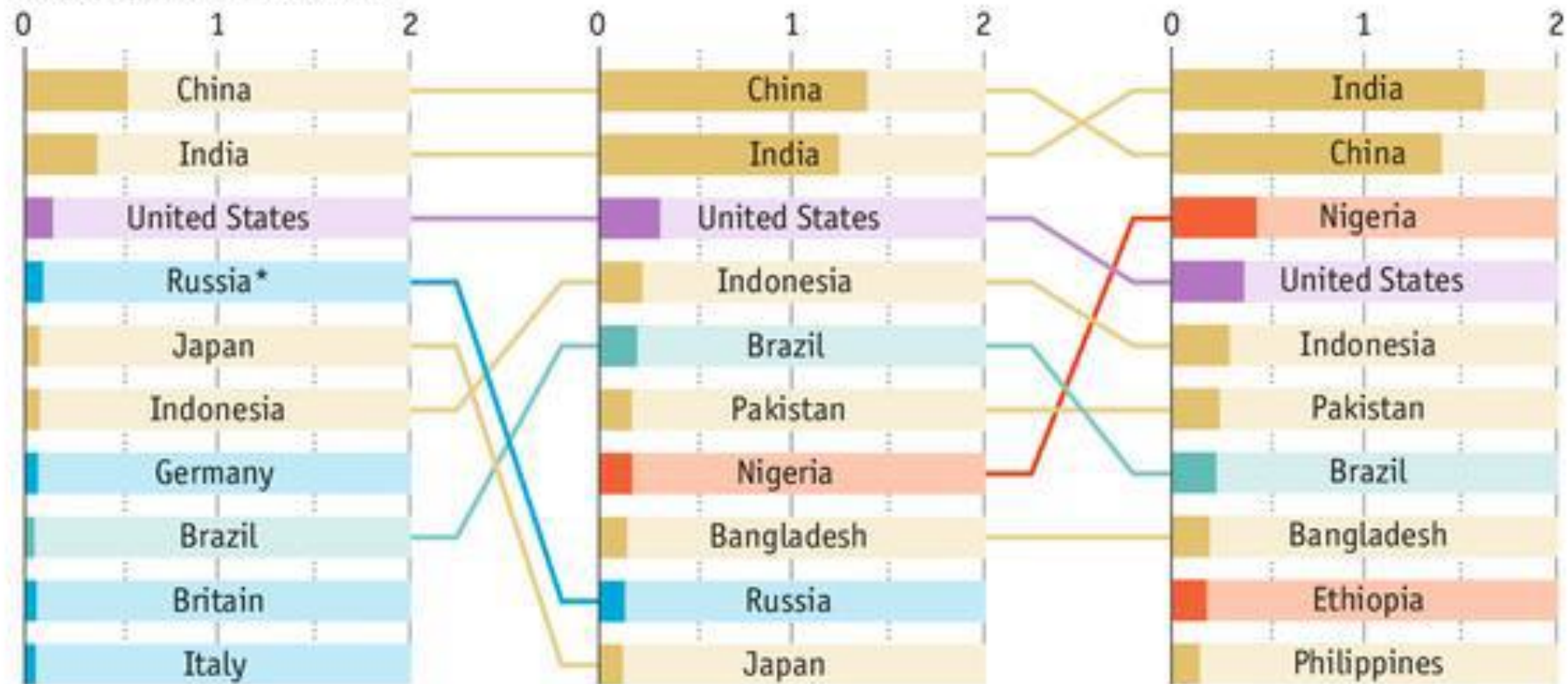
2013

7.2

2050 forecast

9.6

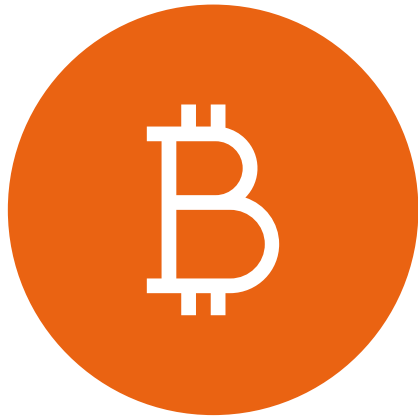
Most populous countries, bn



Source: UN

*Then part of Soviet Union (Russian Socialist Federative Soviet Republic)

ECONOMIC SUSTAINABILITY



WILL THE MARKET
ECONOMY/CAPITALISM
SURVIVE THE 21ST CENTURY?



HIGH PRODUCTIVITY AND
WEALTH CREATION



INEQUALITY



Serra Pelada 1986
(Brazil) Gold Mine

A PARADOX?

The African economy is growing. So is the population. An estimate of 2.5bn people will be living in Africa by 2050 up from about 1.3bn currently

40% of the population will still live below the absolute poverty line.



Technological Sustainability

Knowhow, Innovation and Productivity

Technological information and
Knowledge

Knowhow, Innovation and Productivity

- ▶ Technological innovation is a necessary condition for modern economies productivity
- ▶ It is crucial for companies to possess the right knowledge
- ▶ Quality education plays a key role in this
- ▶ Those who do not have innovation techniques and strategies of production have minimal or no chances of surviving in today's market.
- ▶ Markets are global and so are the competitors



Technological information and Knowledge



Many developing countries of the world today can be by-pass the industrialisation phase of growth thanks to Information technology



Services are increasingly having a greater importance in the international economy.



A country with high knowledge in IT and international language will have a high potential to attract foreign investments and to launch national companies towards the international markets.

Political Sustainability

Local, National and Global
governance

National Sovereignty against
international organisations

The role of Democracy

Above all...

ONE WORLD, ONE HUMAN
RACE ONE COMMON
DESTINY





Thank you