

Public goods and private markets: *issues in food market developments*

Dr Don Gunasekera
Chief Economist

abare

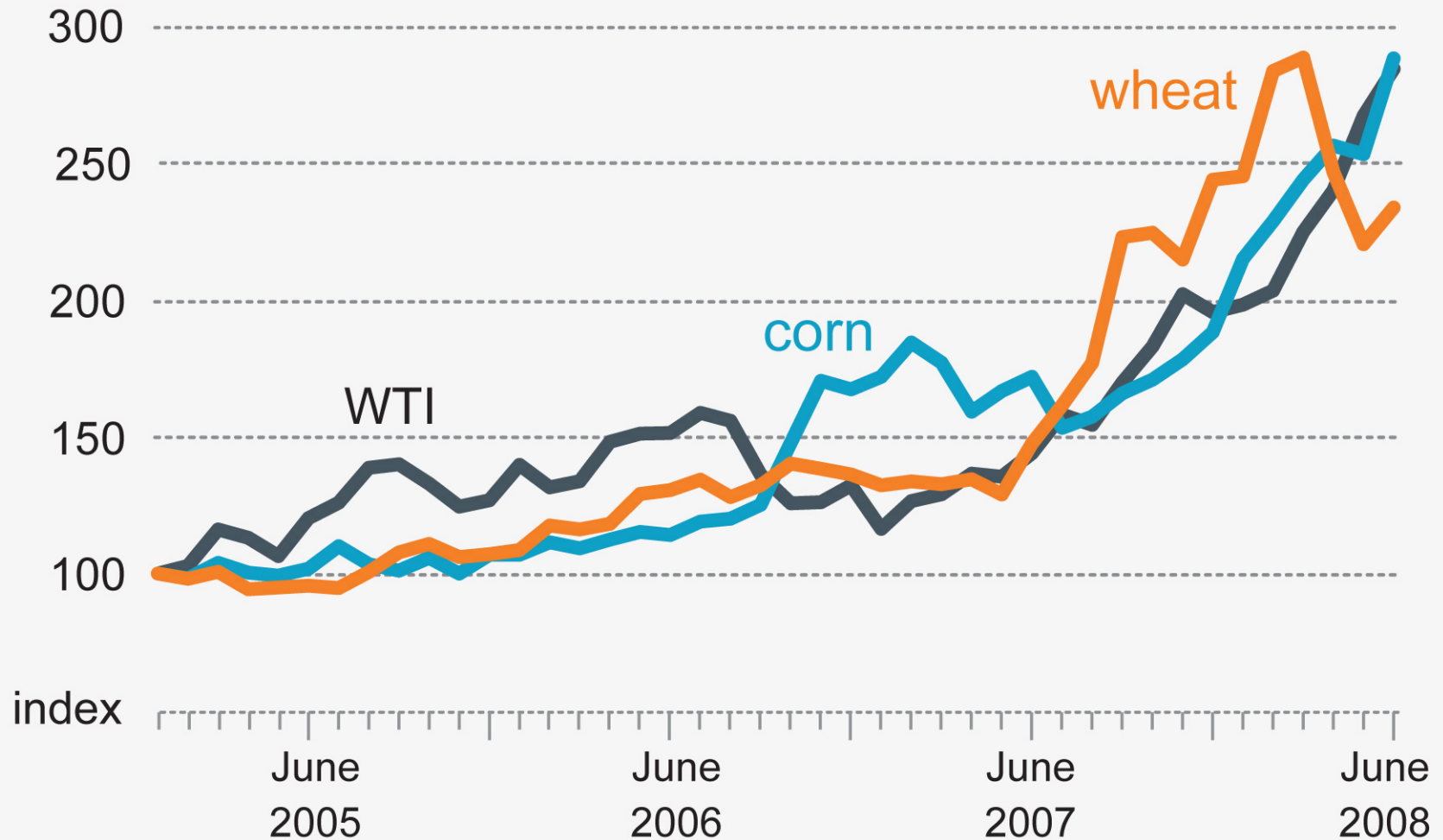
PECC, Bangkok, 25 July 2008

Outline

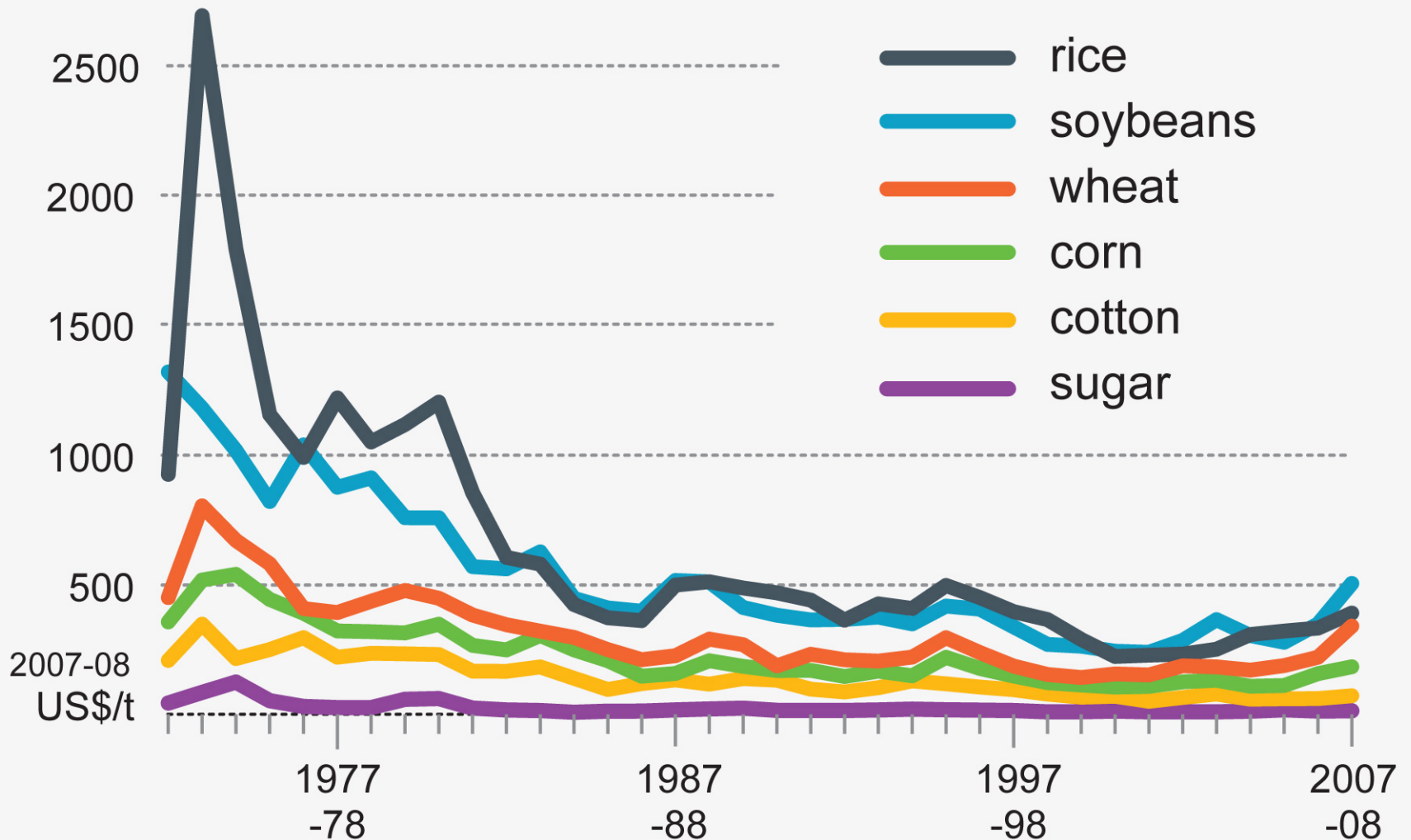
- Scene setting
- Drivers of food demand
- Supply side factors
- Way forward

Movements in grain and oil prices

monthly, ended June 2008

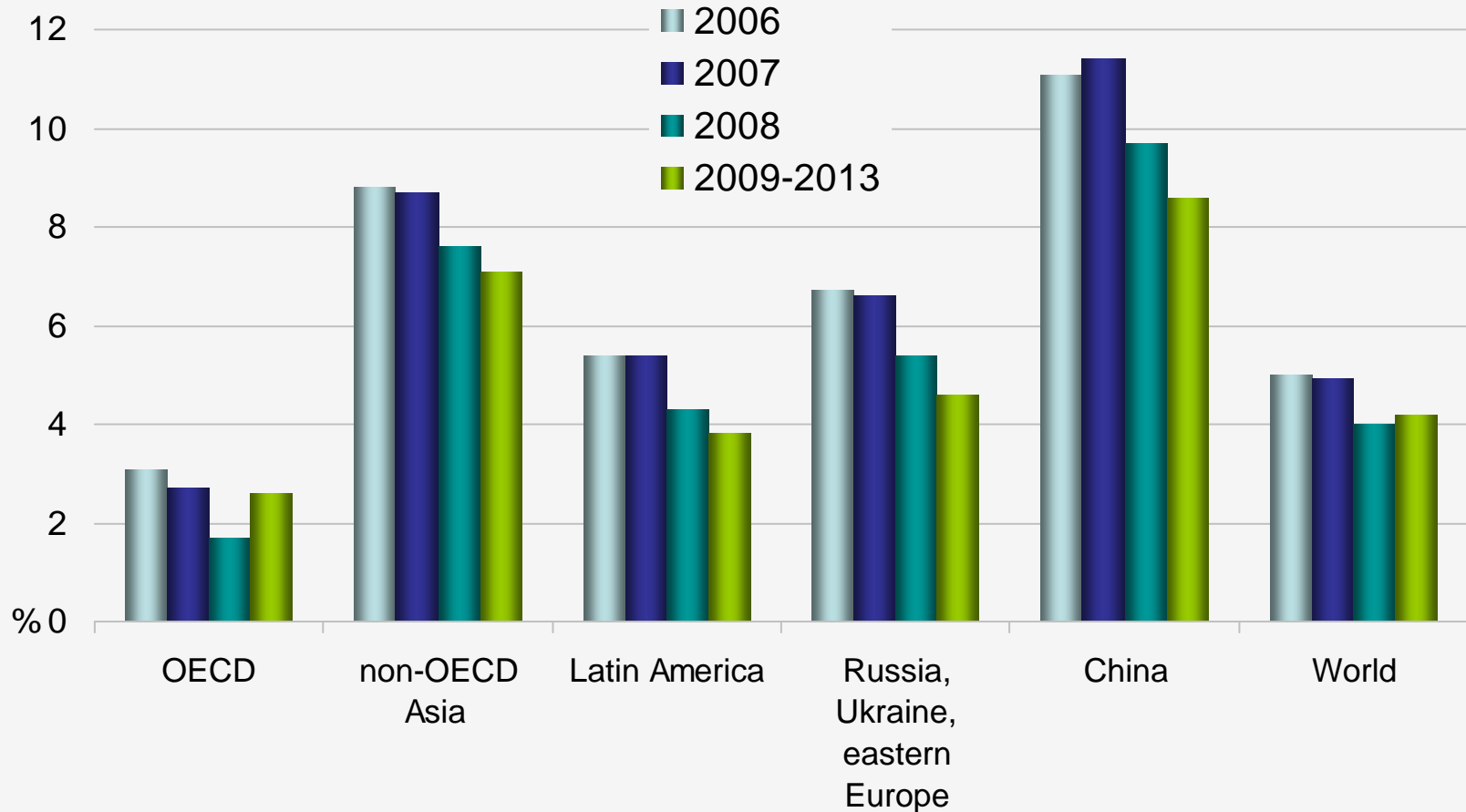


World agricultural commodity prices



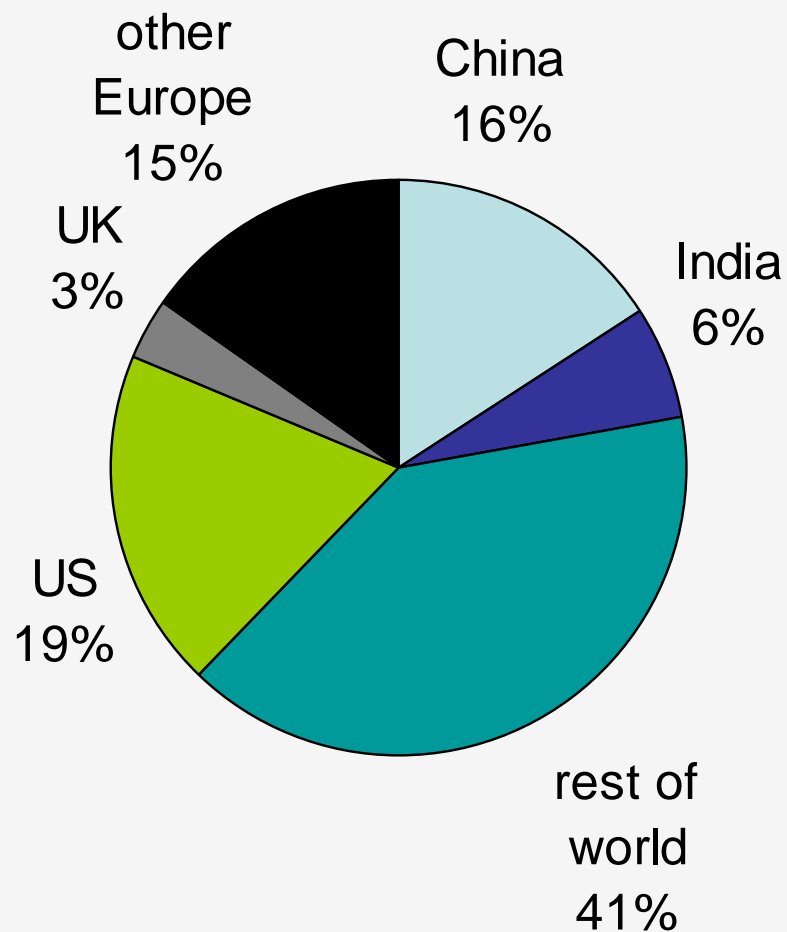
Regional economic growth

% per period

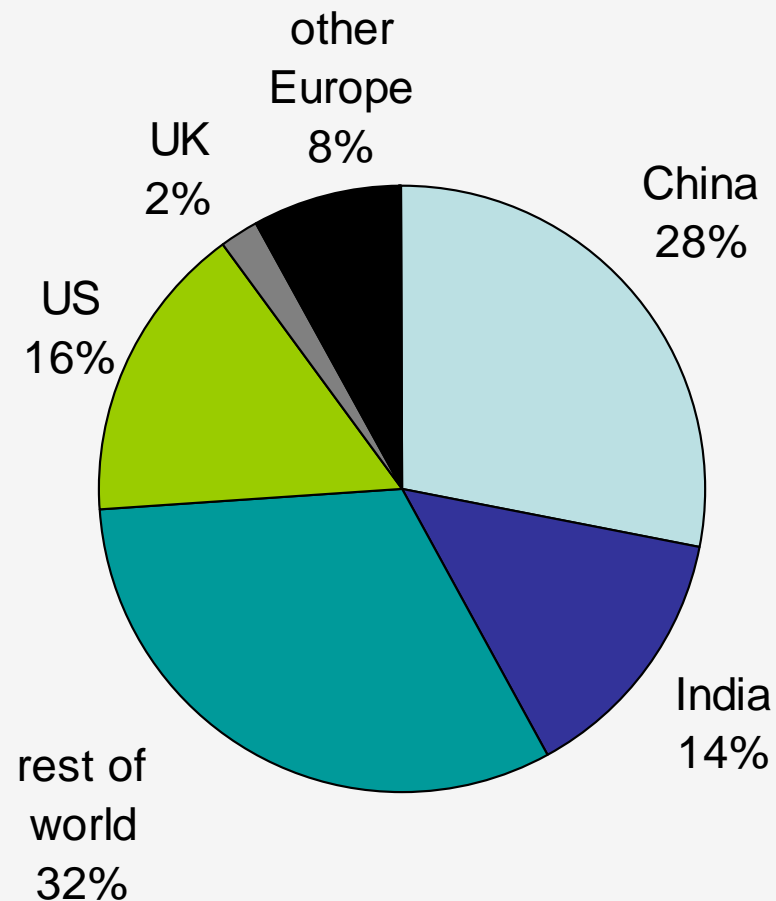


share of world income

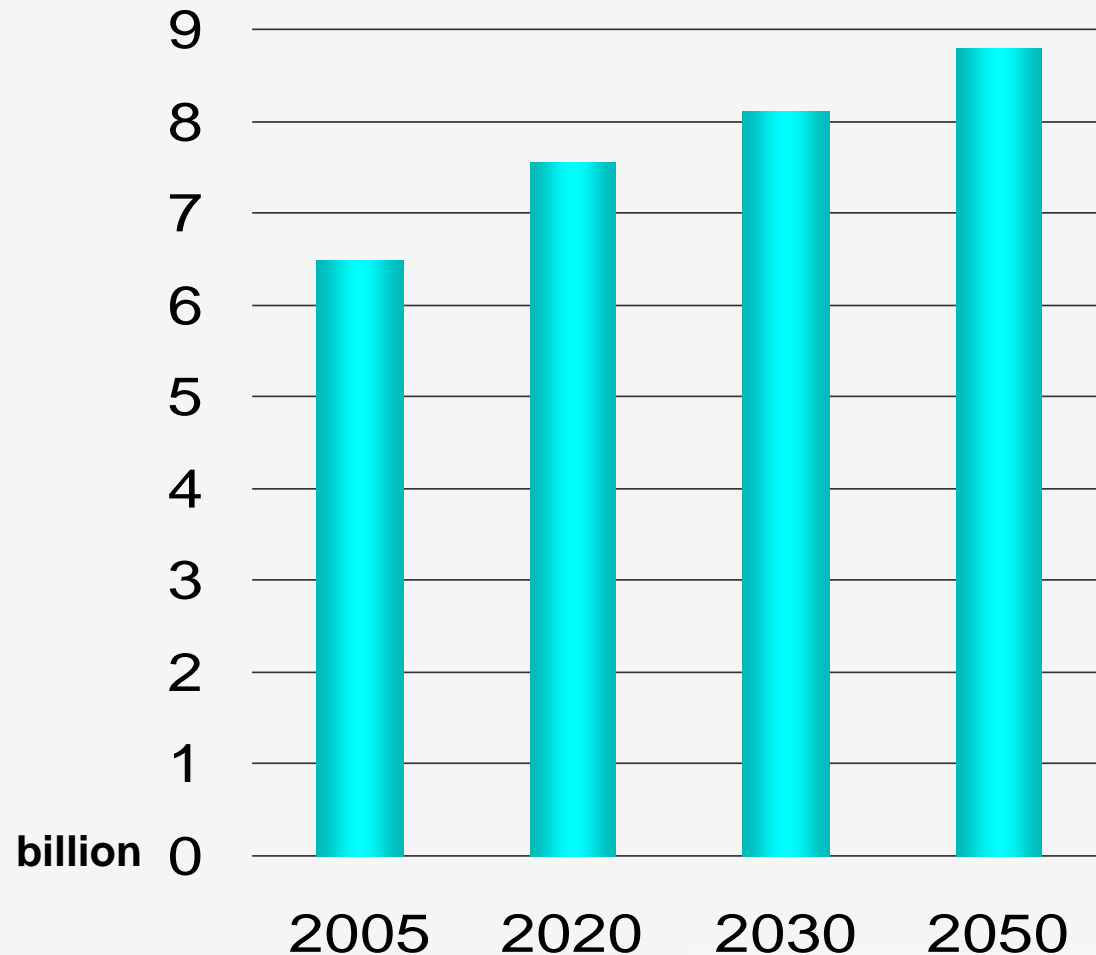
2007



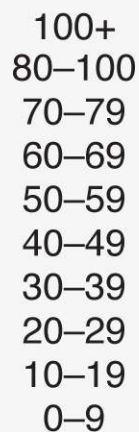
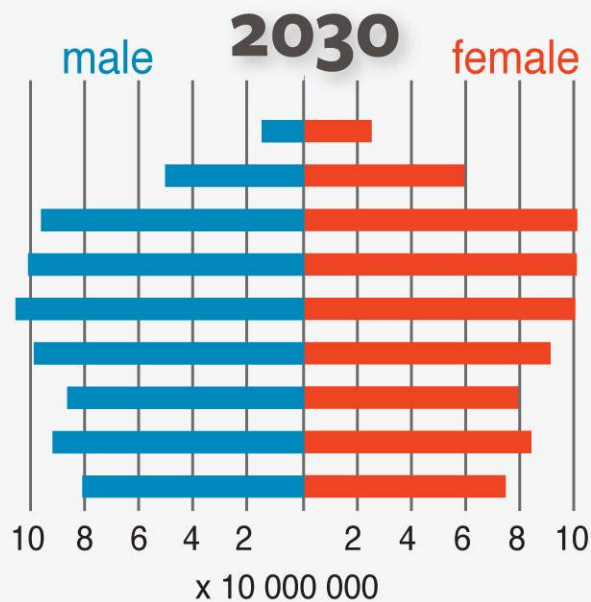
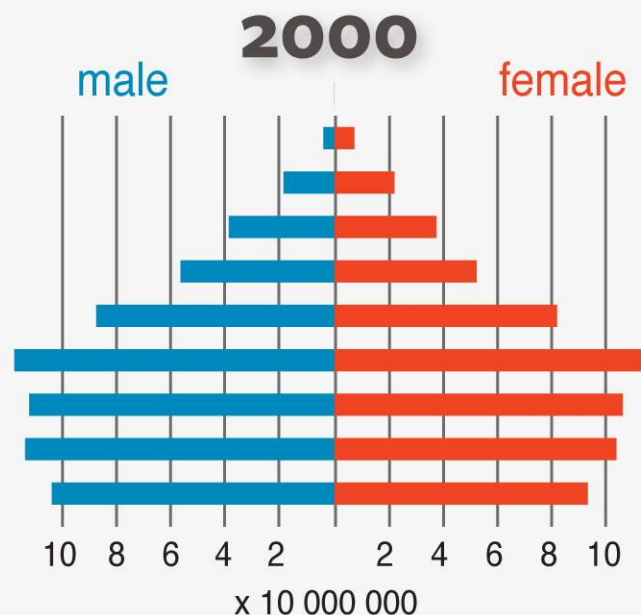
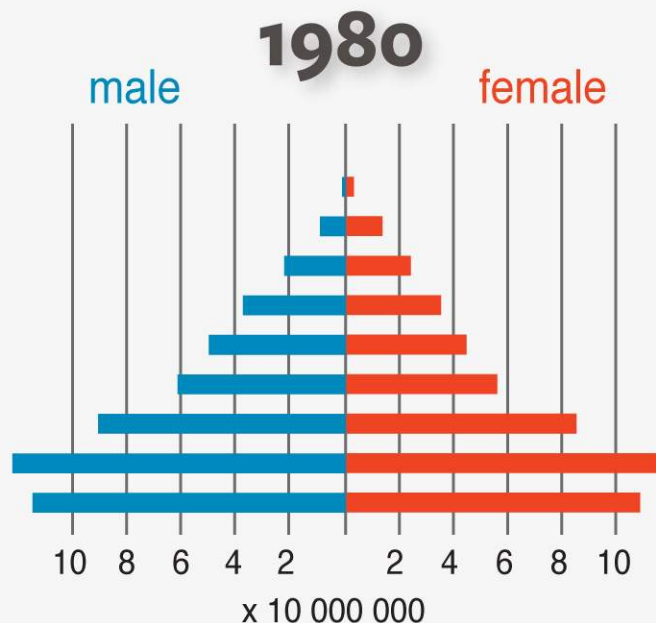
2050



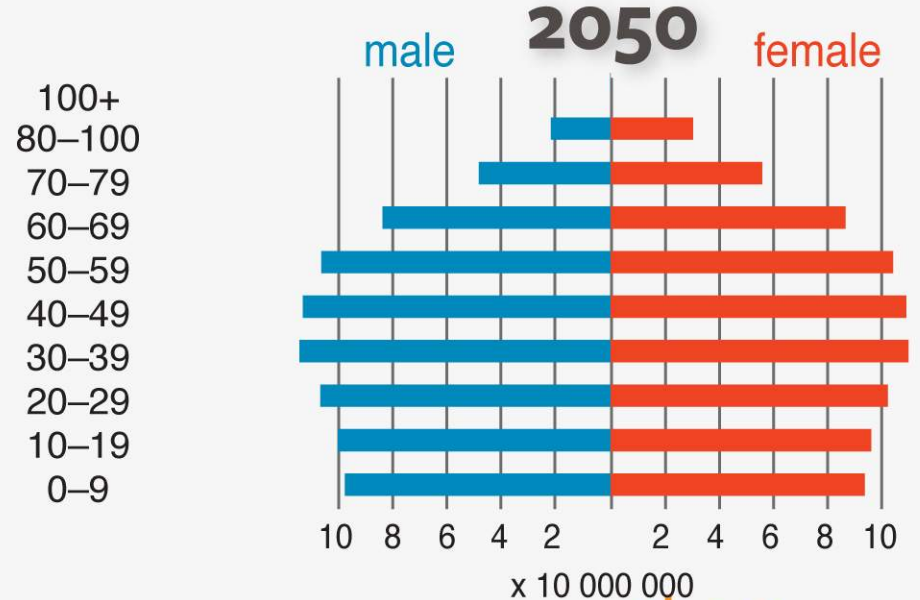
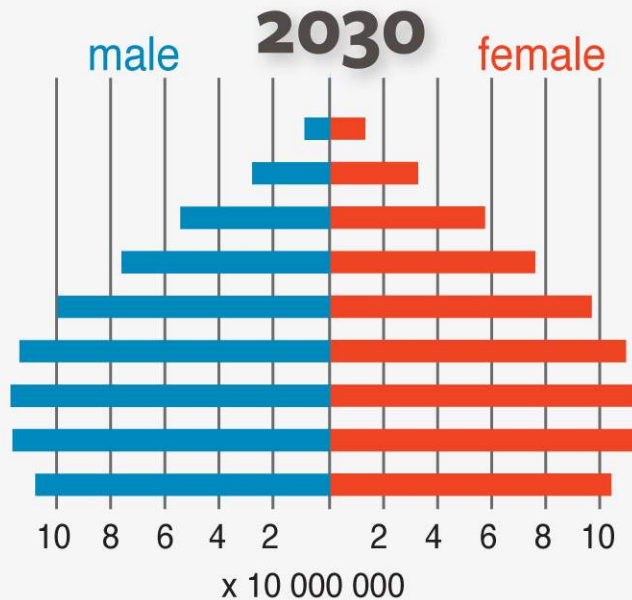
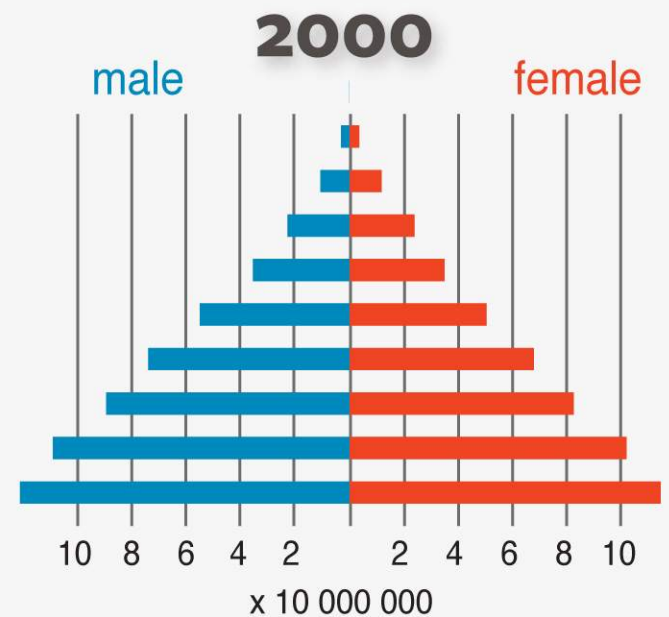
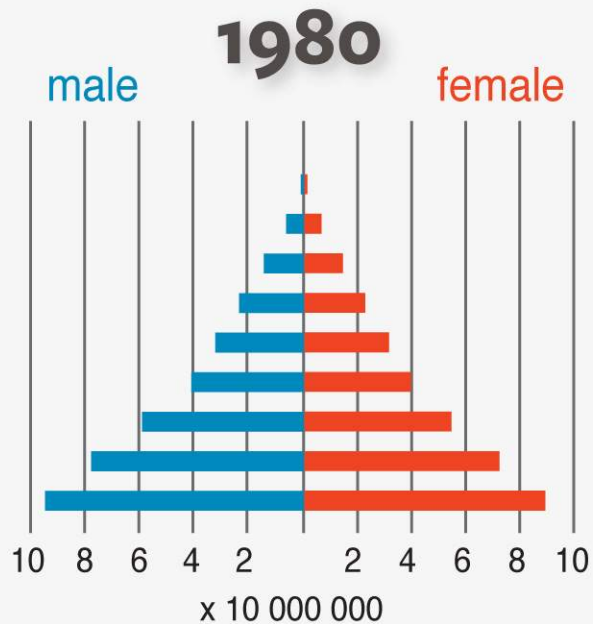
Global population



China

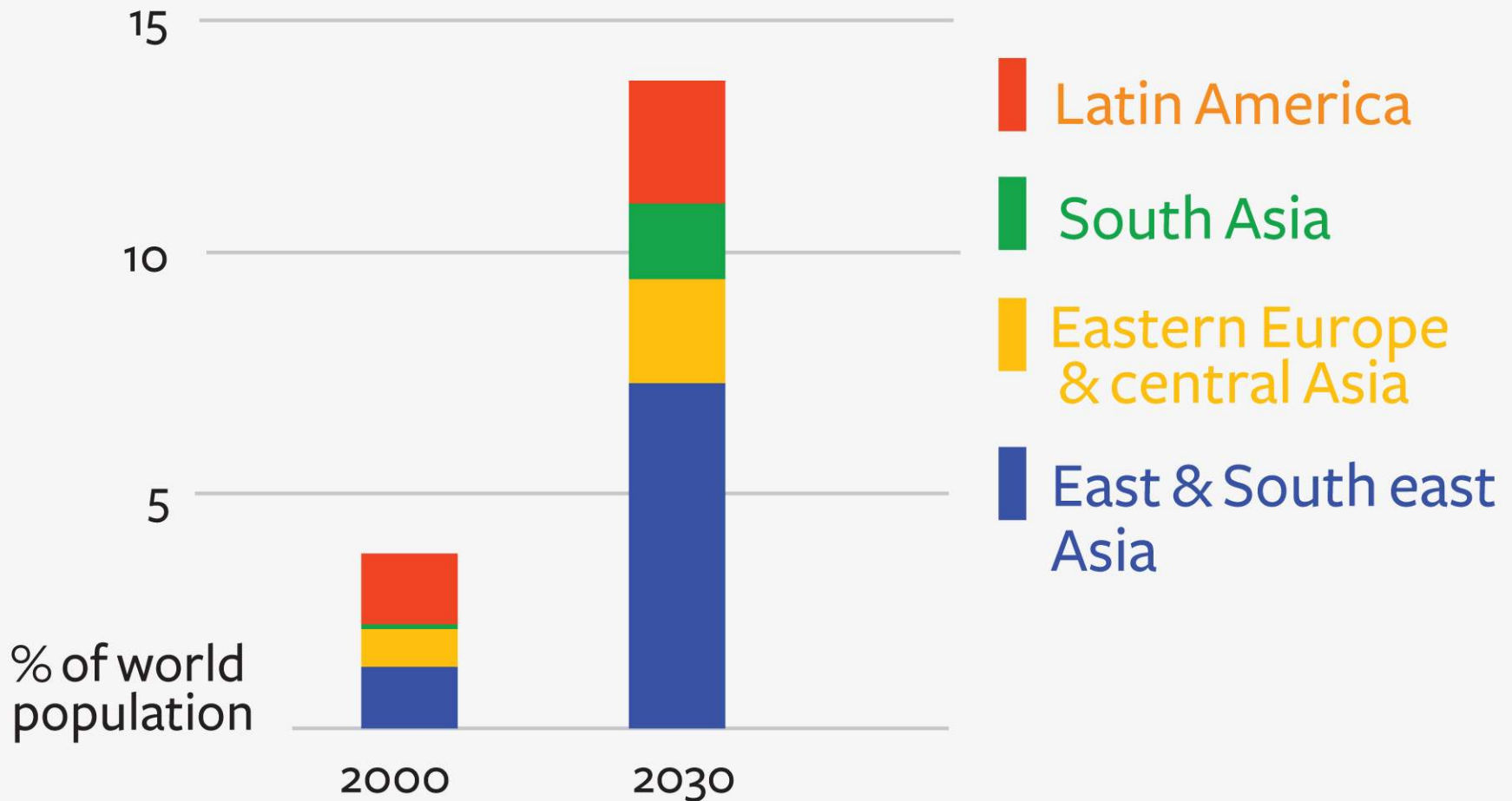


India



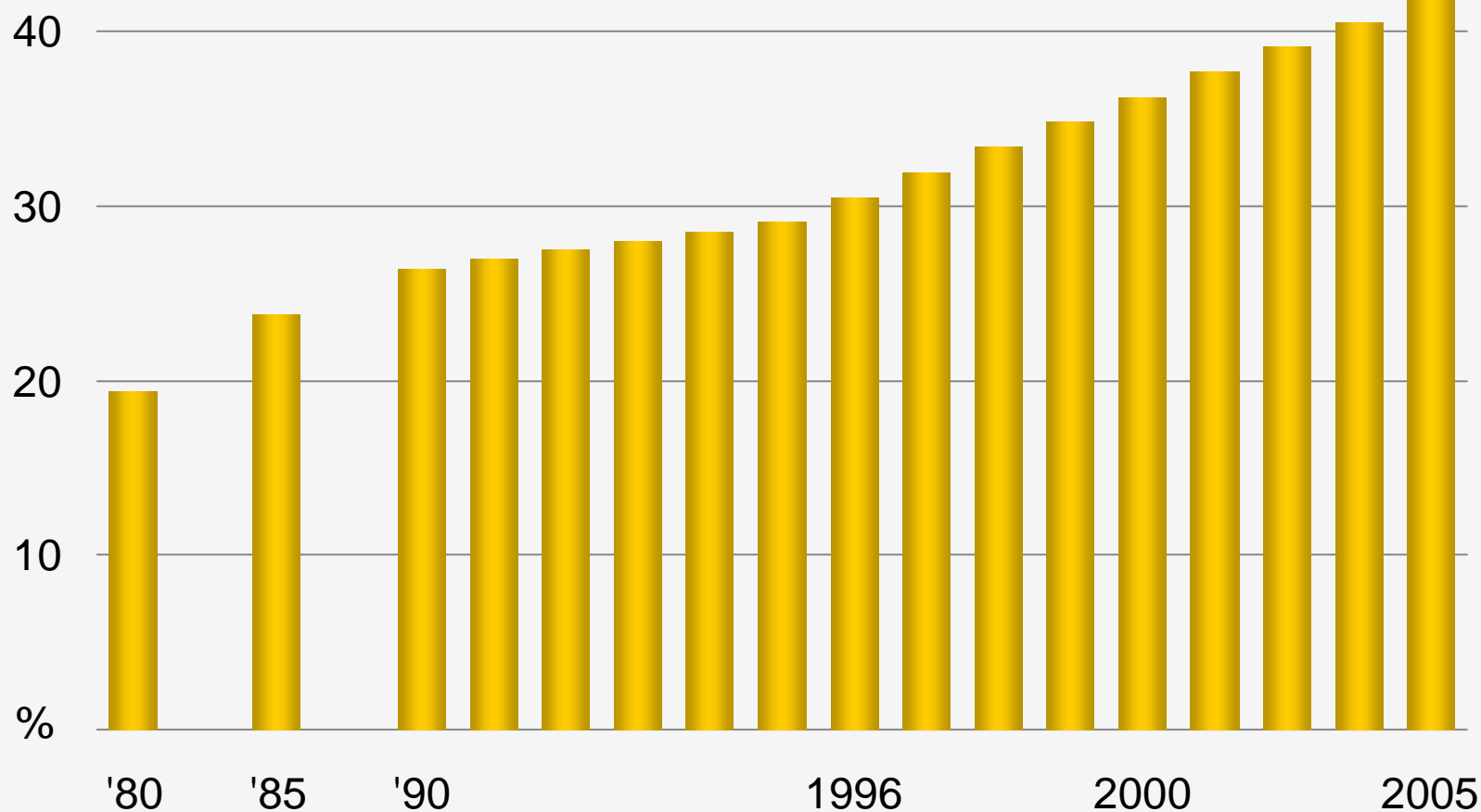
rise of the global middle income population

\$4,000 to \$17,000 per person a year (2000 PPP)



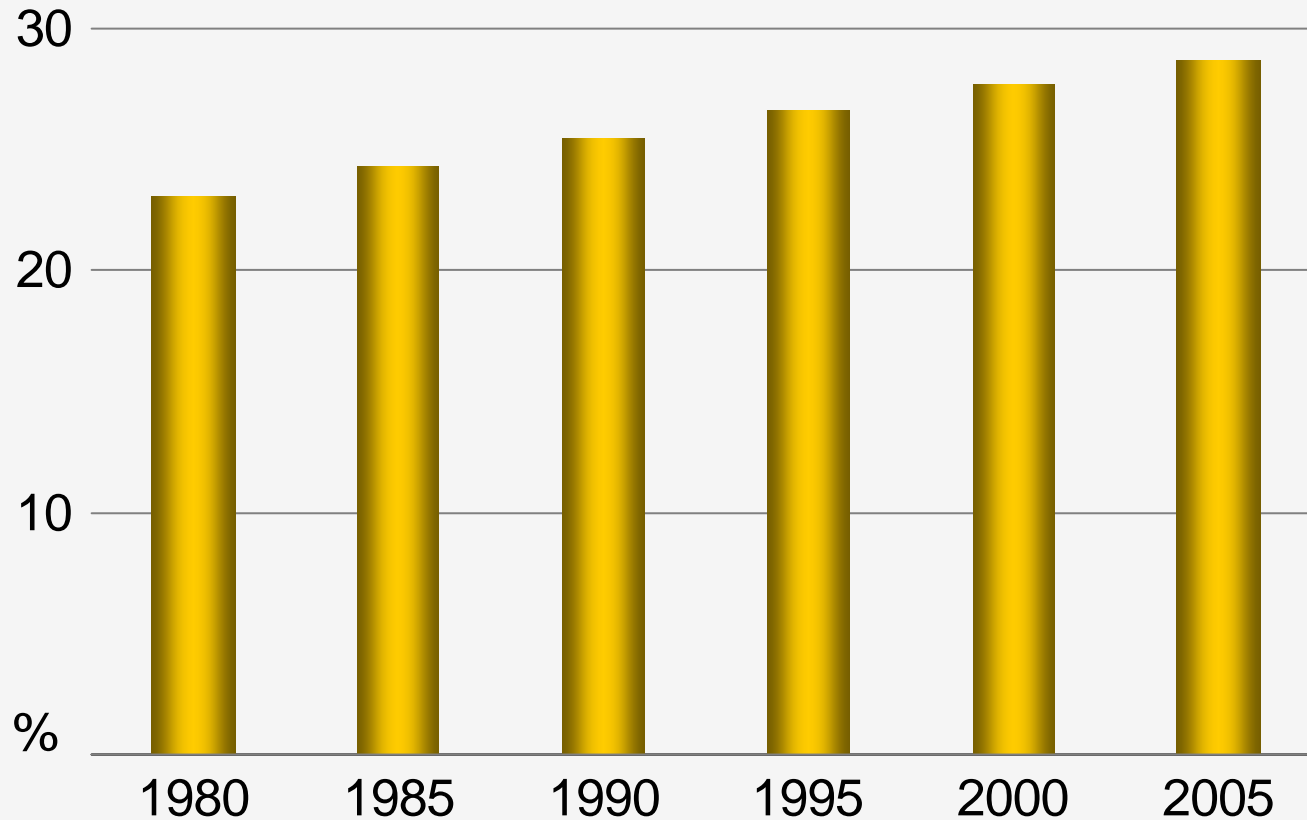
share of population in urban areas

China

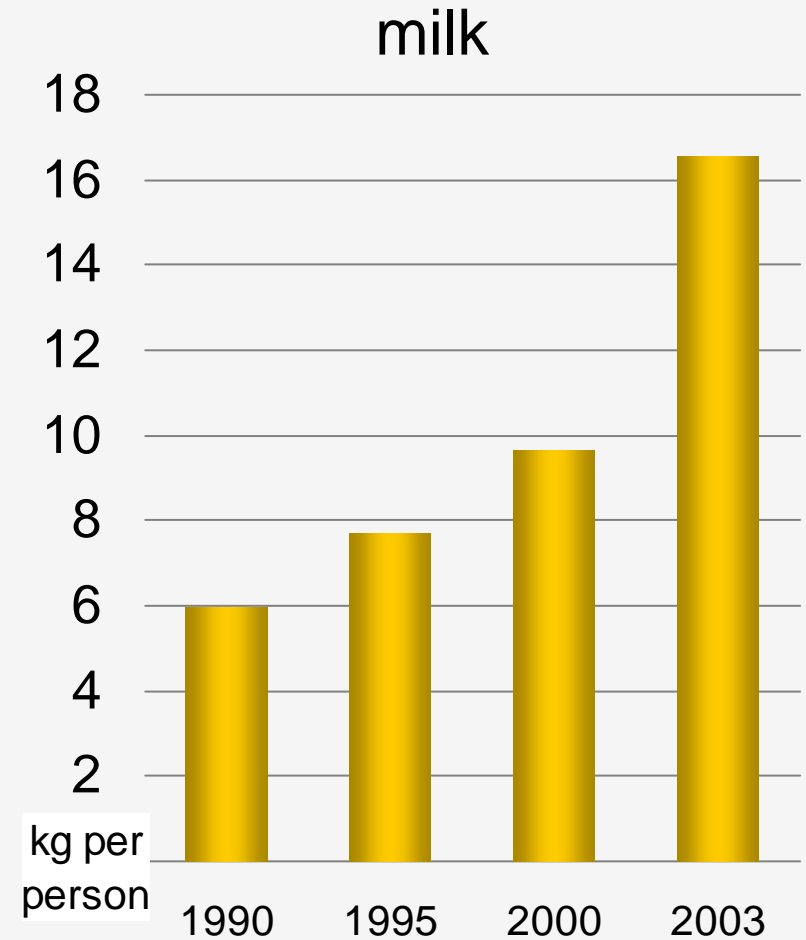
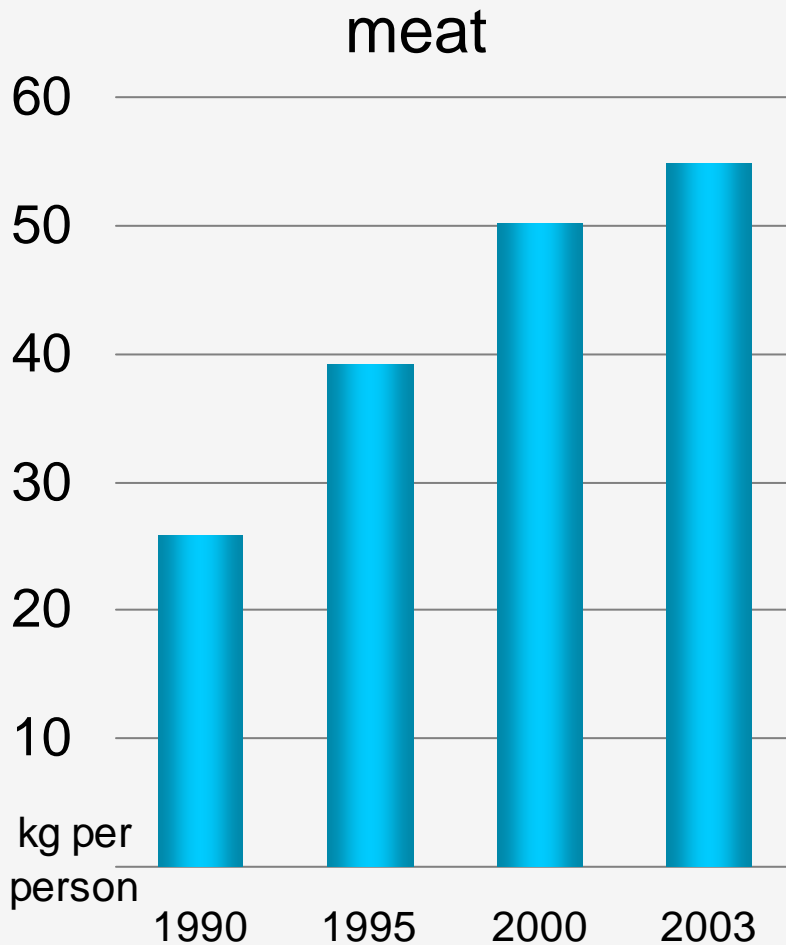


share of population in urban areas

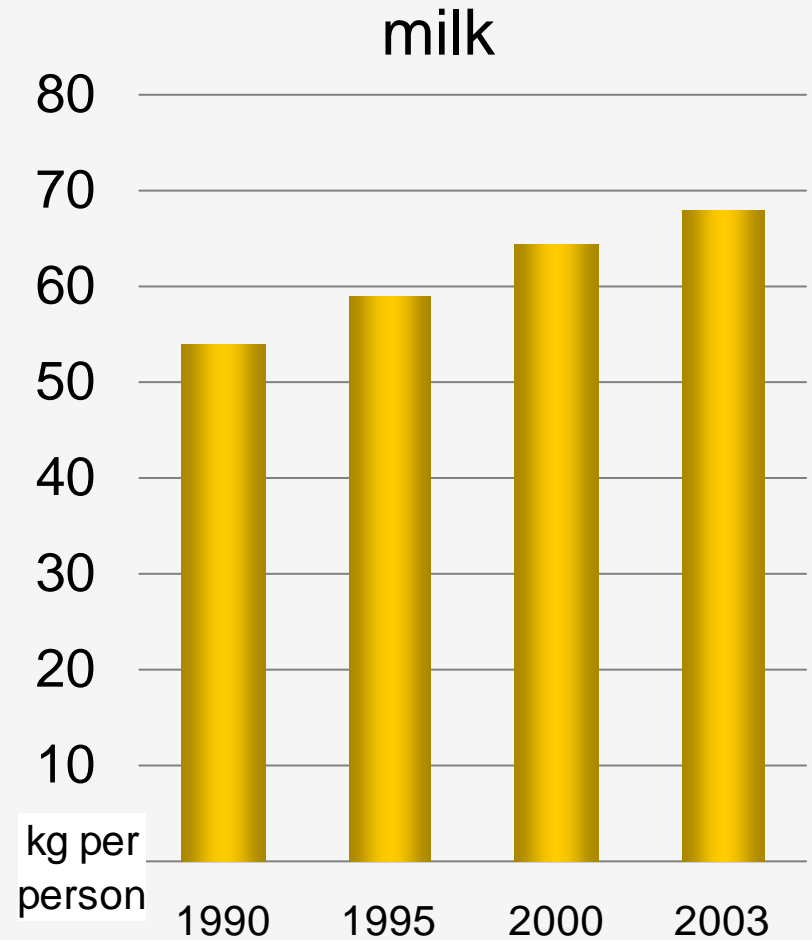
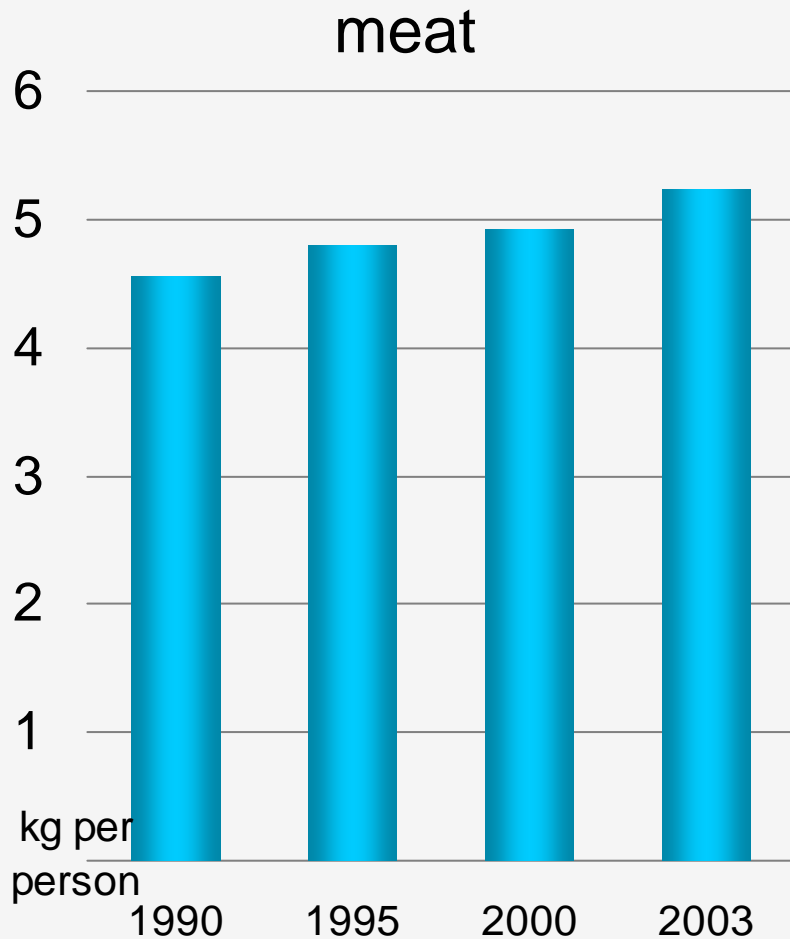
India



Changing demand for meat and milk in China

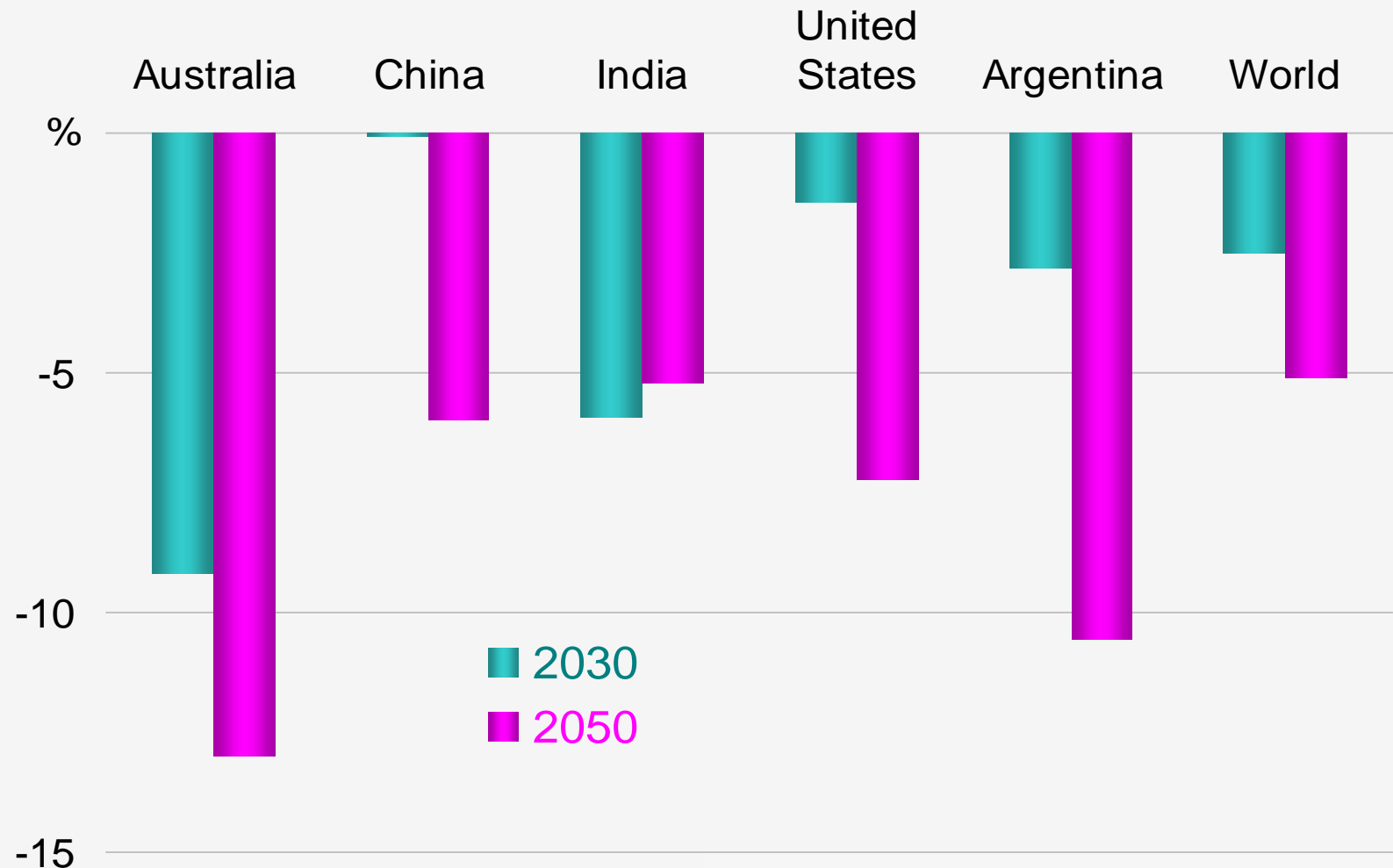


Changing demand for meat and milk in India



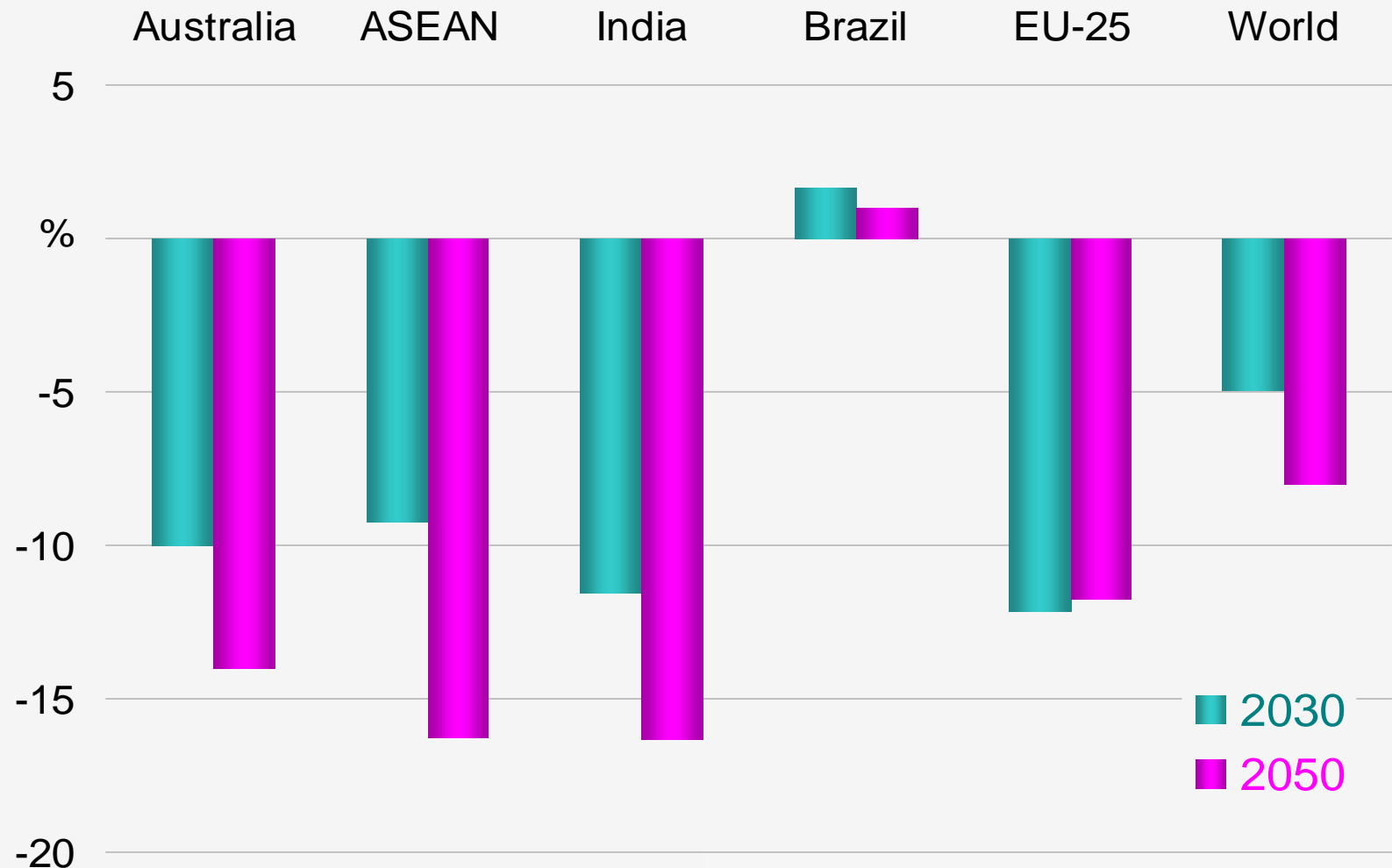
Climate change – percentage change in global wheat production

relative to the reference case (no adaptation or mitigation)



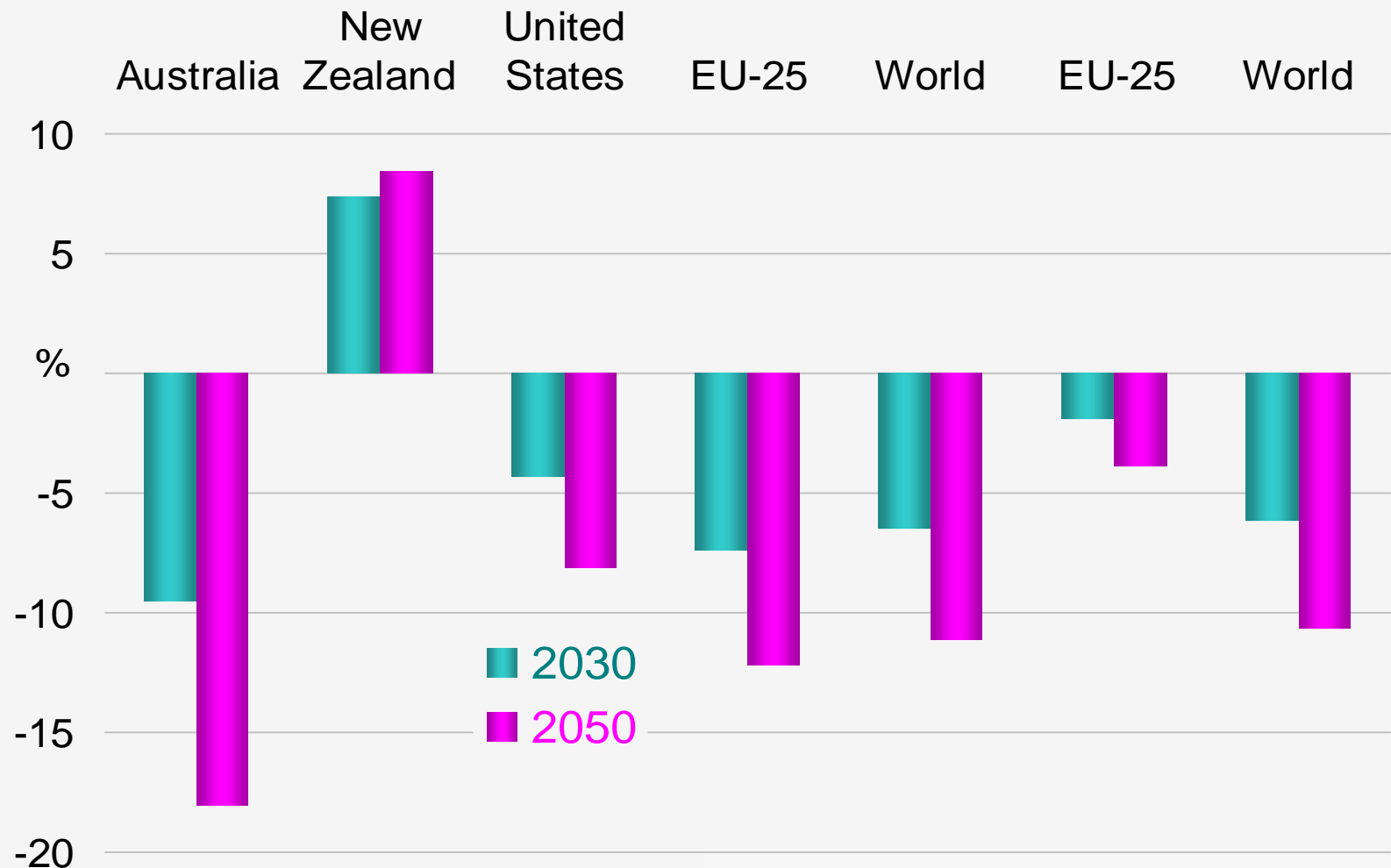
Climate change – percentage change in global sugar production

relative to the reference case (no adaptation or mitigation)



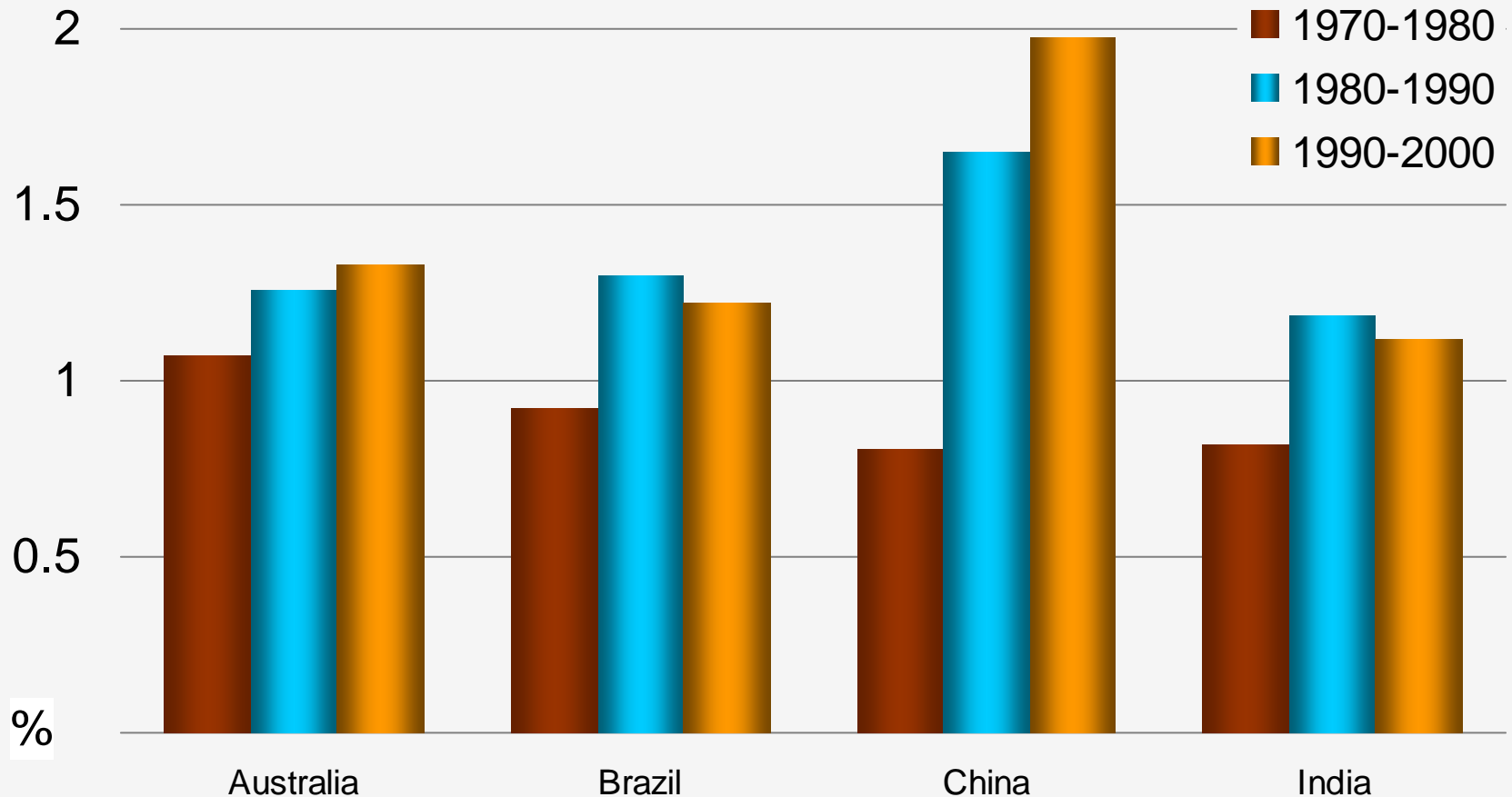
Climate change – percentage change in global dairy production

relative to the reference case (no adaptation or mitigation)



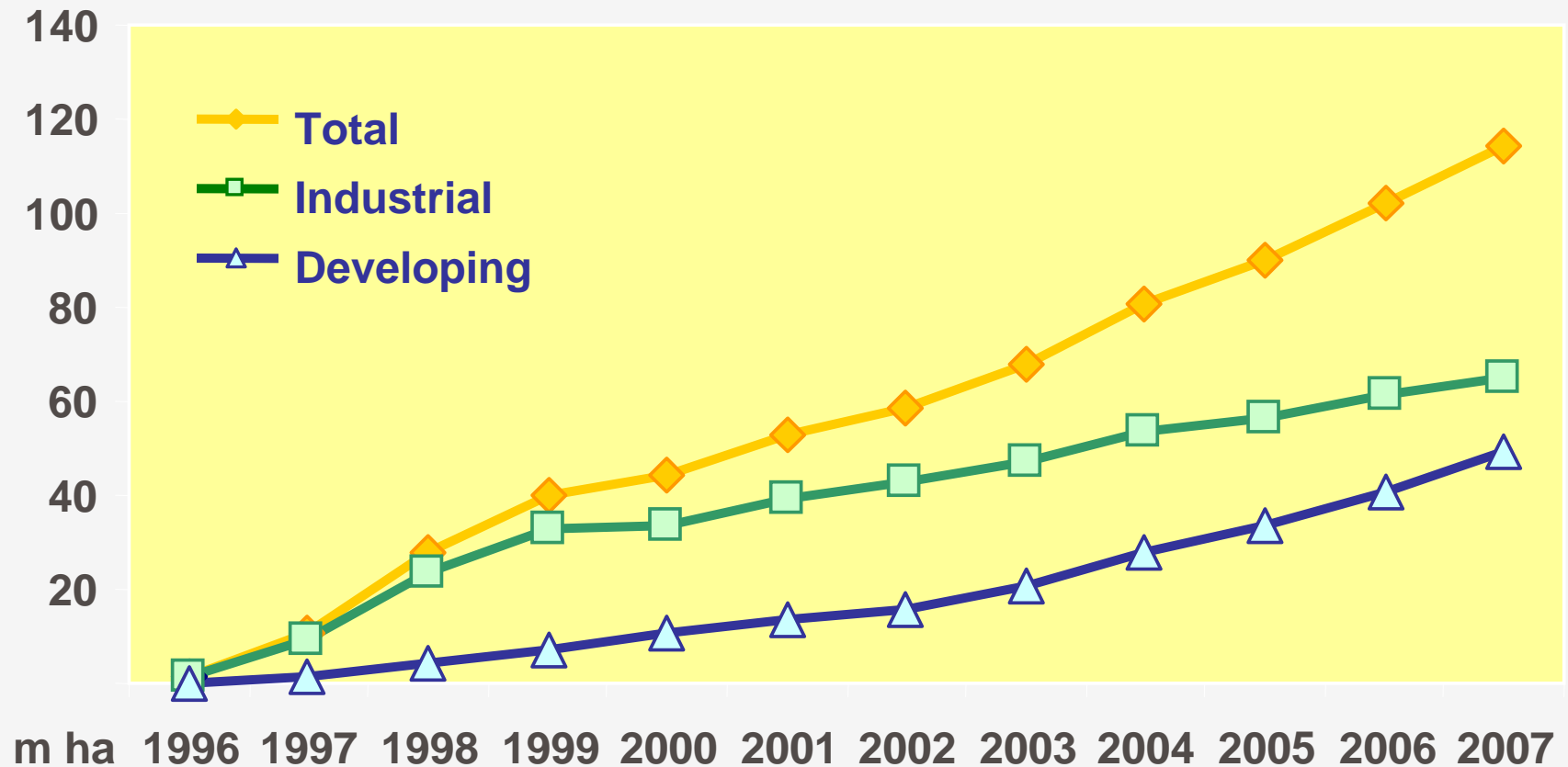
Comparison of agricultural productivity growth rates

% per year



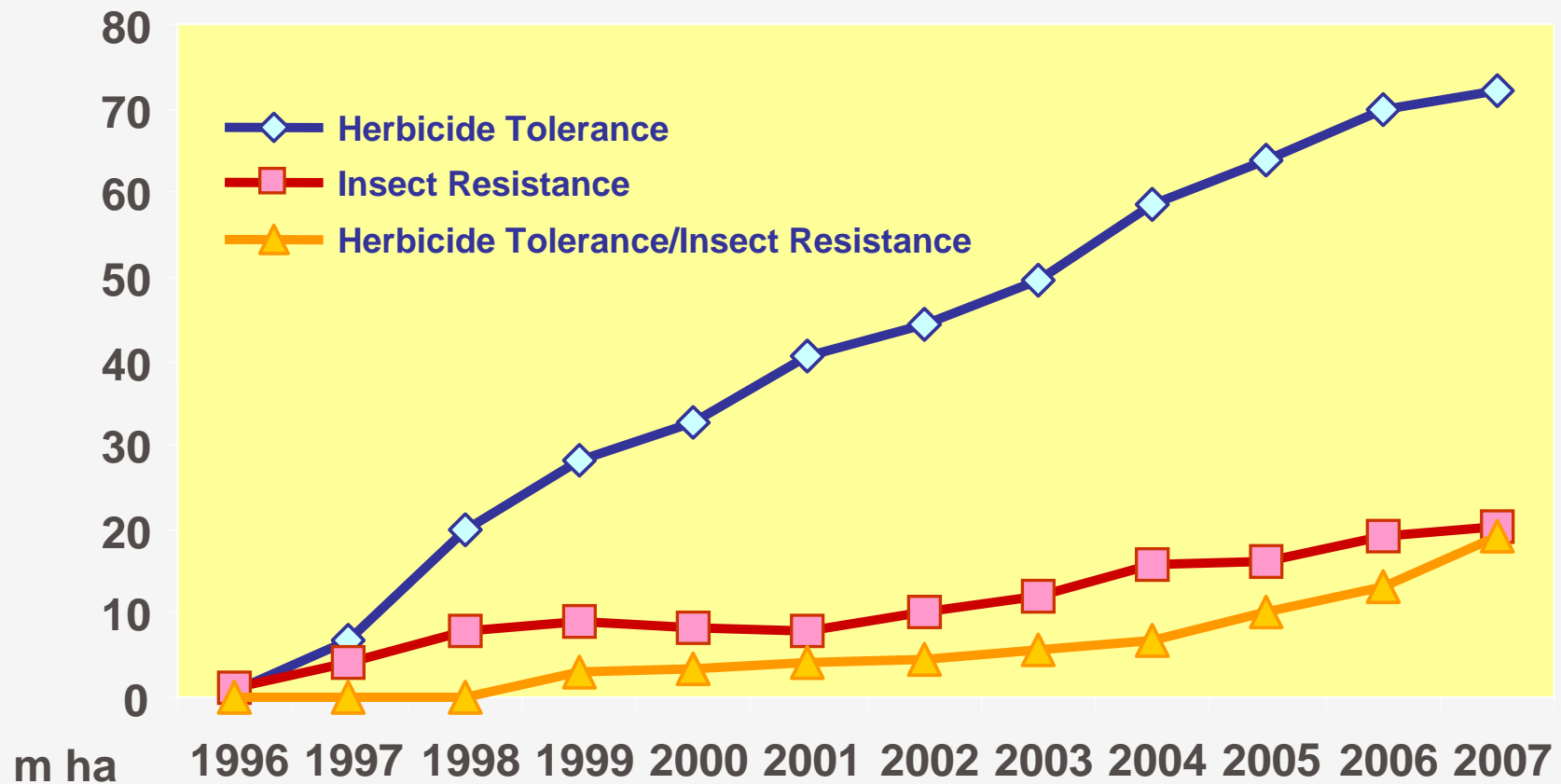
Source: Rao et al. 2004

Global area of GM crops (1996-2007)



Source: Clive James, 2007

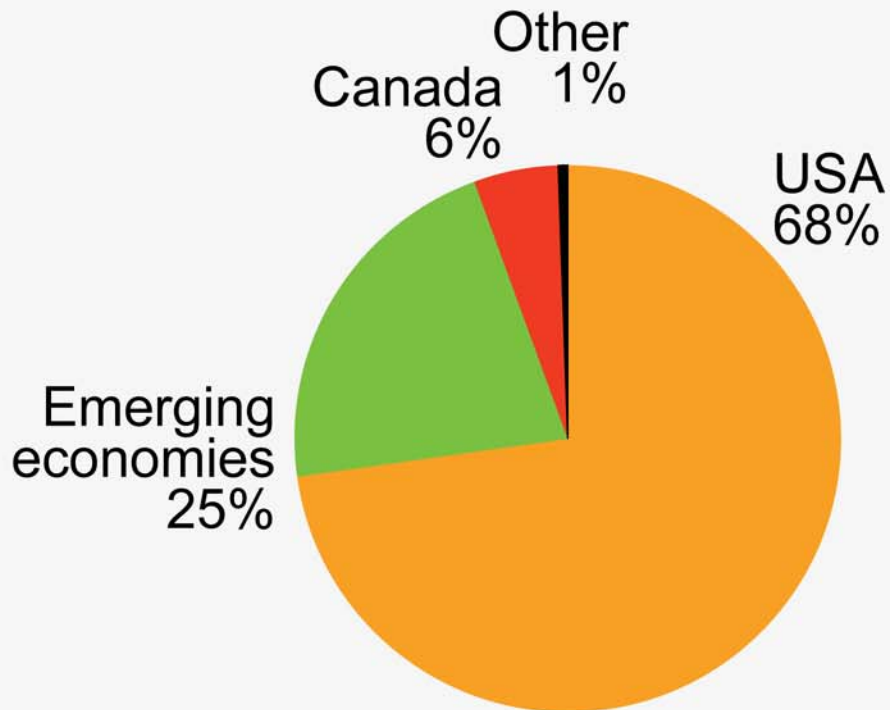
Global area of GM crops by trait (1996-2007)



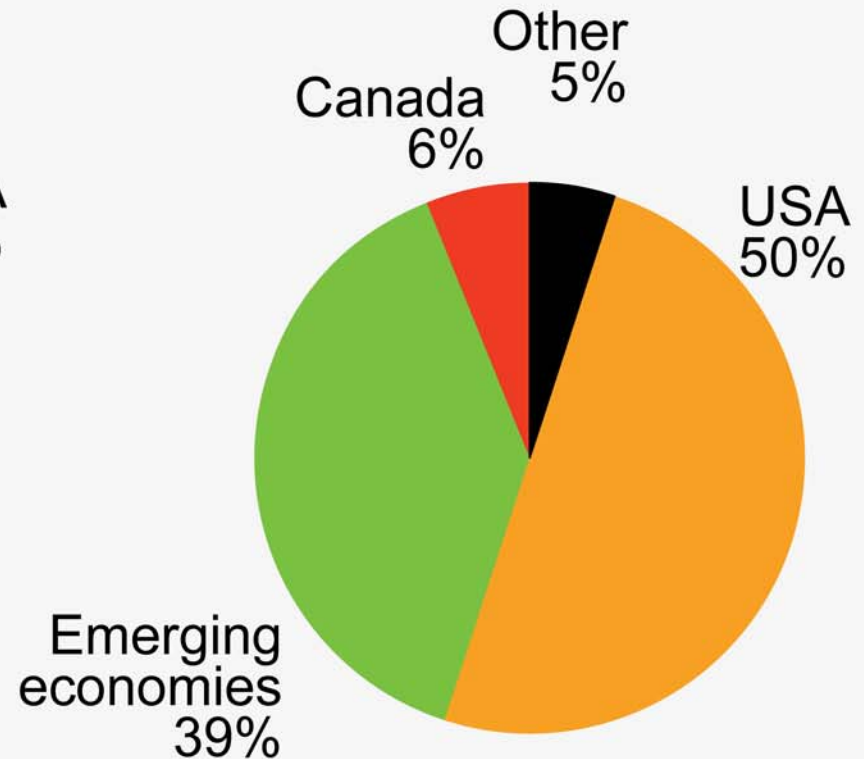
Source: Clive James, 2007

GM crop uptake by country

2001
53 million ha



2007
114 million ha



GM technology and climate change

- Increased resistance to pests and disease
- Increased resistance to salinity, heat and frosts
- Enhanced drought tolerance
- Lower use of herbicide and pesticide sprays can reduce fossil fuel use
- Use of conservation tillage on herbicide tolerant plants

Source: ISAAA (2006); Lee (2007) Spangenberg (2007)

Way forward

- Raising agricultural productivity
 - International public sector action
 - Improved incentives and institutions
 - Revitalise CGIAR framework
- Expand the global reform issues
 - Export restrictions, bio fuel policies, GM technology
- Fix the incentives facing agriculture
 - Revitalise the Doha Round
 - Ensure flow of imports and exports in good and bad times

Source: Subramanian (2008)

abare.gov.au

innovation in economics